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Philadelphia College of Osteopathic Medicine

Department of Psychology

The IMPACT Program: Increasing Employability Skills of High School Students
Through Adventure Based Learning

Titina Finch Brown

Submitted in Partial Fulfillment of the Requirements of Degree of Doctor of Psychology

May 2019

DISSERTATION APPROVAL

This is to certify that the thesis presented to us by Titina Brown on the 18th day of March, 2019, in partial fulfillment of the requirements for the degree of Doctor of Psychology, has been examined and is acceptable in both scholarship and literary quality.

COMMITTEE MEMBERS' SIGNATURES

Chairperson

Chair, Department of School Psychology

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ABSTRACT

High school students face unique challenges following graduation such as the rising costs of post-secondary education, demands from employers for a highly skilled workforce, and the desire of employers to hire workers who are not only technologically proficient, but also effective communicators and team players. Soft skills have become a commodity to businesses. High schools find themselves more and more responsible for adequately preparing students for a rapidly changing economy. Engaging instruction in social emotional learning (SEL) for secondary students is essential in preparing them for this transition. Research shows that Adventure Based Learning (ABL) could be the vehicle for securing students' interest and promoting generalization of social emotional skills across settings. The objective of this study was to investigate a program designed to foster soft skills in technical education students. Data included in this study consisted of pre-and post-student and instructor questionnaires, lesson feedback forms, and an electronic stakeholders' survey. The information was obtained from twelfth grade students enrolled in a technical education high school ($n=181$), vocational instructors ($n=9$), administrators ($n=6$), and support team members ($n=5$). The results of the student survey indicated some small improvements in skills for managing emotions.

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Chapter 1

Introduction

High school students face unique challenges when planning for life after graduation. College costs continue to rise, as does the demand for highly skills workers (Strauss, 2012). More and more students are choosing programs with a technical focus that will prepare them to enter a specific vocation. These educational programs provide students with multiple opportunities. As graduates of a technical program, students may choose to go directly into the workforce, select an additional technical training program, apprenticeship, or a two or four year school that specializes in their chosen field of interest, or some combination of all of the above. However, these technical programs also find themselves under pressure not only to prepare students with the technical skills needed for their chosen fields but to also make sure their graduates have the soft skills needed to make them highly desired candidates and eventually, employees.

Technical training refers to specific industry related skills such as how to install an electrical panel or correctly measure and record an individual's vital signs. Soft skills are those that employers look for, but may not have been directly taught in a student's training program. Soft skills include communication, collaboration, and the ability to manage one's emotions, conflict resolution, and managing multiple responsibilities, among others.

Recent and ongoing advances in technology have had a profound impact on skills that employers want from business graduates for today's market (Mitchell, Skinner, & White, 2010). The shift from an industrial economy to an information society and an office economy means that many jobs now place emphasis on integrity, communication,

and flexibility (Zehr, 1998). Historically, technical skills, also known as hard skills, were the only skills needed for long-term employment and commitment to a company for the lifetime of an individual. Today's workplace is showing that technical skills are not enough to keep individuals employed when organizations are cutting positions to be more nimble and competitive (James & James, 2004). Because intra-and interpersonal skills are critical for productive performance in today's workplace, current and future business leaders are emphasizing the development of these soft skills (Nealy, 2005).

Recently, more attention has been brought to the importance of soft skills in the workplace. The Wall Street Journal published several articles in 2016 on the desire of employers to find employees that have not only industry-specific skills, but also skills such as taking initiative, communicating clearly and problem solving. These skills have become more highly in demand for several reasons. Many routine tasks have been automated, necessitating the human employees to think more creatively and critically. Additionally, the job market has become more competitive, giving those who can, for instance, make small talk with customers, become more attractive hires. Finally, research also indicates that companies who hire individuals with well-developed soft skills see more employee engagement. Data gathered by Gallup indicate that companies with high employee engagement "were 22% more profitable, have 25% to 65% lower turnover and 37% lower absenteeism" (Zeldin, 2016). Employees who demonstrate mature soft skills lead companies to be more successful and more profitable.

Additional studies (Robles, 2012) indicate that there is a large body of research that supports the importance of soft skills to today's workplace. One study found that 75% of long-term job success depends on people skills, and only 25% is dependent on

technical knowledge (Klaus, 2010). Another study found that hard skills contribute only 15% to one's success, whereas 85% of success is due to soft skills (Watts & Watts, 2008, as cited in John, 2009). Because employers are increasingly looking for employees who are mature and socially well adjusted, they rate soft skills as number one in importance for entry-level success on the job (Wilhelm, 2004). The complexity of the global marketplace requires individuals to be flexible, to communicate, and collaborate across not only departments but sometimes cultures as well (Davidson, 2016).

Employers identify and value soft skills. However, students may have a difficult time accurately appraising their skills. NACE (National Association of Colleges and Employers, 2018) has found a disconnect between employers' ratings of recent graduates career readiness skills and the perceptions of those same graduates. When NACE compared ratings from employers on recent graduates with the graduates' self-ratings, what they found was astounding. In some career readiness competency areas, employers and students have a difference of over 40 percentage points in their ratings. For example, 89.4% of recent graduates rated themselves as proficient in the area of Professionalism/Work Ethic; however, only 42.5% of employers agreed. Another difference is found between employers' ratings of Leadership skills in recent graduates (33.0%), and the graduates own self-appraisal (70.5%). Graduates rated themselves significantly higher than employers' perceptions in seven of the eight career readiness competencies. This divide cannot be ignored. Direct instruction in these areas of soft skills must be explored and expanded in order to prepare students properly for the workplace.

Moreover, an effort must be made to increase the accuracy of graduates' self-assessments of their abilities. Although the focus on the importance of soft skills for the global marketplace has been noted in several studies and in national newspapers, soft skills have also become a focus of local job markets and targeted business publications. Recently, smaller news outlets across the country have had several articles which mention the importance of soft skills for the local employment needs. An article in a local Mid-Atlantic paper, *Lancaster Newspapers*, indicated a focus on teen employment, directed "show initiative and demonstrate both teamwork and customer service skills" (Molitoris, 2015). Additionally, local employers interviewed for the article indicated that the best employees are excited and engage with customers.

These skills are also touted as necessary for those who are hired in order to keep their jobs. *The Chicago Tribune*, in an article by Schawbel (2013), advises young professionals to "focus on soft skills over hard ones". The article indicates that these skills are necessary, practically, because people move up in a company due to an increased focus on managing people and accomplishing goals. Finally, in an article titled, "Top 7 Job Skills You Will Need in 10 Years if You Don't Want to be Left Behind," Jones (2017) states that due to the changing job market, although technical skills top the list, "soft smarts" and "adaptation" also make the list. "Soft smarts" are defined as social intelligence and "adaptation" that allows an individual to go outside of his or her comfort zone. These articles and interviews provide evidence for a need at the local level of direct instruction in workplace soft skills in order to equip the students for the 21st-century workforce.

Adolescence is a crucial time for the development of emotional competence. Fleming and LeBuffe (2014) found that students who scored higher on measures of social-emotional competence were more likely to have a score of Proficient or Advanced on the Pennsylvania System of School Assessment (PSSA). The study utilized recent data from a district-wide SEL implementation in a mid-sized, urban school district in the Northeast. The authors examined the relationship between students' social-emotional competencies and their performances on statewide achievements. Teachers completing the Devereux Student Strengths Assessment (DESSA, LeBuffe, Shapiro, & Naglieri, 2009) and the DESSA-mini (Naglieri, LeBuffe, & Shapiro, 2010) assessed social-emotional competence. Results are presented as T-scores for both assessments. T-scores of 60 or above represent social-emotional Strengths; T-scores ranging between 41-59 inclusive, represent typical levels of social-emotional competence, and T-scores of 40 and below represent a need for social-emotional instruction. Only 33% of the students who were categorized as Needing Social Emotion Instruction were able to perform in the Proficient or Advanced range, indicating that adequate levels of social-emotional learning are needed in order for students to perform well academically.

In 2017, Stephanie Jones and Jennifer Kahn co-authored a consensus statement from the national Commission on Social, Emotional, and Academic Development. One conclusion from this document was that social, emotional, and cognitive domains are interconnected and facilitate or hinder the learning experience. The authors state, "The success of young people in school and beyond is inextricably linked to healthy social and emotional development," (Jones & Kahn, 2017, p. 4). They point to skills such as working well with others, planning and setting goals, and persevering through frustration

as necessary skills for students to achieve successfully, not only in school but also to reach their full potential beyond the classroom.

Jones and Kahn (2017) indicate that support for fostering social and emotional development exists within multiple contexts. Educators support these efforts and increasingly call for more supports within the classroom and decreases in barriers to these services. A report by DePaoli, Atwell, and Bridgeland (2017) demonstrated support for soft skills instruction by principals who see soft skills as teachable, believe they should be developed in all students, and know that young people equipped with soft skills will not only be better students but also grow into better adults. Stakeholders such as employers have also recognized the need for efforts that support the development of social and emotional learning in students. Employers recognize that these skills are necessary to prepare the future workforce to fit the needs and values of companies. Finally, policies at the state and federal level have moved the focus of social and emotional development to a higher priority. The Every Student Succeeds Act adds a Career Readiness Benchmark. This new benchmark requires schools to provide evidence that students have explored careers, learned about goal planning and attainment, and also have been exposed to skills that will prepare them to meet the demands of the working world (as retrieved from PA Department of Education, March 17, 2018).

Helping teachers, principals, school counselors, psychologists and parents of transition-age students become aware of the needs of employers can help to make the transition to the working world an easier one. A 2012 survey by The National Association of Colleges and Employers (NACE) reported that nearly 80% of surveyed employers search for evidence that the potential employee can work in a team. On the

NACE website, their director, Edwin Koc, states, “Overall, results show that the ability to work in a team is the number one soft skill that employers seek in their new hires,” (www.naceweb.org). Unfortunately, many students report negative experiences in classroom teamwork exercises (Galbraith & Webb, 2013). Many times, assignments are given for team completion before the requisite skills needed to do so are taught. A 2006 study by Prichard and colleagues warns that not preparing students to work in a team can be detrimental. These researchers found that when students are given skills to work as a cohesive group, not only does group performance increase, so does individual performance. Based upon these cited supports and needs, schools are ideal places to support the social and emotional development of students and increase each one’s skills for being a valued member of a team, and as such, an eventual valued member of the workforce.

Social-Emotional Learning in the Vocational Environment

The definition provided by the Collaborative for Academic, Social, and Emotional Learning (CASEL) for social-emotional learning (SEL) is, “The process through which children and adults acquire and effectively apply the knowledge, attitudes, and skills necessary to understand and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions” (CASEL, 2017).

Social Emotional Learning programs are intended to build emotional competence. Emotional competence (also called emotional intelligences in the literature) is defined as one’s ability to identify, express, understand, and regulate emotions (Nellis, et al., 2011). Emotional competence encompasses the ability to identify, comprehend, and regulate

emotions effectively for use in communication, cognitive processes, and relationship building and maintenance (Mayer & Solovey, 1997). Individuals who can manage their emotions should be better able to use them to their advantage throughout their careers.

There are many sources of evidence indicating that emotional abilities and dispositions are crucial in adjustment. Individuals who measure higher in emotional competence are likely to have higher academic achievement and higher job performance. The definition of emotional intelligence should be related to one's ability to build supportive social networks or social capital. Social capital is the connections an individual has built through communication and interaction with others (Adler & Kwon, 2002; Lin, 2001). This social capital can be used to facilitate higher job performance and associated outcomes. Rode et al. (2017) found that emotional intelligence helps individuals gain the "social capital" they need to be successful in their careers.

Emotional intelligence or emotional competence benefits not only individual career goals but also companies as a whole. Many authors equate the emotional intelligence needed for adequate interpersonal skills with soft skills needed in the workplace (James & James, 2004; Perreault, 2004),

Rode et al. (2017) postulate that emotional intelligence becomes even more strongly related to career success at higher organizational levels where leadership skills become increasingly important. By teaching the skills necessary to demonstrate adequate to high levels of emotional intelligence in the workplace, adolescents and young adults are given the skills needed to grow into these future leadership positions, benefiting the company as a whole. Robles (2012) discusses the role that strong soft skills play in the ability to provide excellent customer service. The ability to understand customer needs is

important because it is vital not only to professional success but also to promoting the success of the company.

Adventure-Based Learning

Adventure Based Learning (ABL) is described as a valid curriculum model that can be used to encourage intrapersonal and interpersonal relationship skill building (Stuhr et al., 2018). It is built upon Experiential Learning Theory, which was developed and defined by Kolb (1984) and includes six theoretical assertions. It is built upon the idea that knowledge is active and socially created. ABL is used across many professional fields including physical education, human resources, communication, tourism, and behavioral intervention, to name a few.

Although there is literature regarding Adventure Based Programs that are facilitated by school psychologists or other school-based mental health providers, few provide insights into a specific curriculum and how its delivery affects the attainment of skills. Whoever facilitates these programs may influence how skills learned in the activities are processed and generalized to other areas of the students' lives. Adding facilitators with training in social and emotional development increases the likelihood that the skills needed for successful development will be considered and fostered. Many programs lend themselves to teaching skills needed for the workplace and allow for independence of design and thought that appeal to adolescence. With the addition of individuals trained in social and emotional development, the focus can include not only skill building that facilitates the specific skills needed for healthy development, but also incorporates the identification of barriers to the learning process.

Purpose of the Study

The available literature on Adventure Based Learning includes quantitative outcome data, but there is not much available on the review of the programs themselves. There is a lack of data concerning investigating participants' observations of the program, how individual participants, as well as groups of participants, differ in their perceptions of skills attainment, and finally, application of the learned skills. The purpose of this study is to evaluate the effectiveness of a curriculum developed for a regional vocational school that utilizes Adventure Based Learning techniques to develop the social-emotional skills needed to be successful in a workplace setting.

A systematic evaluation of this school-based program will help determine what aspects of the program worked best, provide feedback for improvement, and allow for interaction and observation. The information collected through this evaluation process will enable the program staff to refine aspects of the program to strengthen benefits for students.

Research Questions

1. Do students report an increase in their use of soft skills?
2. Do instructors report an increase in students' uses of soft skills?
3. Do students report an increase in their use of adaptive skills in response to difficult situations?
4. Is there a difference in the use of soft skills between students who receive specially designed instruction and those who do not?
5. What are stakeholders' perceptions of the IMPACT program?

Chapter 2

Review of the Literature

Career education is deemed vastly important not only for the individual student's success, but also for the success of individual states and the country as a whole. The introduction to the PA Department of Education's Workplace and Career Standards states, "Pennsylvania's economic future depends on having a well-educated and skilled workforce. No student should leave secondary education without a solid foundation in Career Education and Work" (PA Department of Education, 2018, p. 3).

In recent years, there has been an increase in the need to prepare students not only to pursue post-secondary education, but also to enter the workforce with training in a skills trade. California is spending \$6 million to advertise the advantages of vocational education, in addition to \$200 million that is allocated for improving technical education delivery (Krupnick, 2017). Although there is a need not only for highly skilled workers, there is also a financial benefit for students who get this type of training. Individuals with what was historically known as a vocational education, but with what we now call career and technical education, are actually more likely to be employed than are their counterparts with traditional 4-year academic credentials. People who received training in a career and technical education field are also significantly more likely to be working in their particular field of study (Krupnick, M., 2017).

Career and Technical Education encompasses a wide range of careers and skills. The Association for Career and Technical Education (2014) defines career education as one that educates students for a range of career options through 16 Clusters and over 79 "pathways". The clusters include areas such as Hospitality and Tourism, Information

Technology, Law, Public Safety and Security, Health Science, just to name a few. A goal of career and technical education is to prepare students to be college and career-ready. The focus is not only on academic skills, but also on employability and technical skills (Association for Career and Technical Education, 2014).

Technical schools will play a large role in preparing students for the needs of the 21st century economy. According to an April, 2018 report on the radio program, All Things Considered, “Construction, along with health care and personal care, will account for one-third of all new jobs through 2022, according to the Bureau of Labor Statistics. There will also be a need for new plumbers and new electricians. And, as politicians debate a massive overhaul of the nation’s roads, bridges, and airports, the U.S. Department of Education reports that there will be 68 percent more job openings in infrastructure-related fields in the next five years than there are people training to fill them” (April 25, 2018). For these students, technical skills will not be the only skills they need to be competitive. More and more employers are indicating a need for students to have social skills that allow them to problem-solve and communicate in a team. This supports the need for schools to find a program that addresses the “whole student” when choosing a program or curriculum for career education.

Competencies Required for Success in the Work Place

The ability to work successfully in any job setting necessitates a combination of technical skills required for the specific job that is to be performed and the less tangible “people skills” that enable workers to get along comfortably with supervisors and colleagues. These multiple “people skills” are not job specific, but are important across all jobs and industries and at all levels of employment (Tsitskari et al., 2017).

Defining skills that are necessary for successful employment is important in order to measure students' competence in these areas. Research consistently supports the need for direct instruction of employability skill sin order for graduates to gain and maintain employment (Tsitskari et al., 2017, Clark et al., 1994). John Dewey, a 19th century educational reformer, was a proponent of the connection of school to larger society. He recognized the need to educate students in skills such as problem solving and critical thinking, skills he connected to success after formal schooling ended (Webb et al., 2014).

A recent GALLUP poll (2018) echoes these same sentiments about the need for soft skills instruction for life-long success. GALLUP (2018) found parents, teachers, principals and superintendents have varying definitions of non-academic soft skills needed for success after graduation. However, there was a large degree of agreement between and among these same participants that not only are soft skills important, but that they also need to be directly taught and assessed.

An agency that promotes the successful combination of technical and soft skills is The Perkins Collaborative Network. They focus on funding, data collection, and development of programs that increase employability skills for secondary and post-secondary students who pursue an education in a technical career.

The Perkins Collaborative Resource Network is under the direction of the US Department of Education and is responsible for fulfilling the goals outlined in The Carl D. Perkins Career and Technical Education Act of 2006 (Perkins IV). The Perkins Act is meant to provide grants and support “to develop more fully the academic, career, and technical skills of secondary and postsecondary students who elect to enroll in career and technical education programs” (The Perkins Collaborative Resource Network, 2018).

The Perkins Employability Skills Framework (2018) differentiates between the types of skills needed to compete in specific vocations (hard skills) with those that are needed across disciplines in order to be successful in the workplace (soft skills). The framework outlines employability skills as an overarching concept and breaks it down into three sub-groups: applied knowledge, effective relationships, and workplace skills. The subgroups are further delineated into specific skill areas. Applied knowledge encompasses critical thinking and applied academic skills; effective relationships includes interpersonal skills and personal qualities; finally, workplace skills contains resource management, information use, communication skills, systems thinking, and technology use (US Department of Education, 2018).

Robles (2012) found the following 10 soft skills to be among the most desirable among executives:

- Communication – oral, speaking capability, written, presenting, listening
- Courtesy – manners, etiquette, business etiquette, gracious, says please and thank you, respectful
- Flexibility – adaptability, willing to change, lifelong learner, accepts new things, adjusts, teachable
- Integrity – honest, ethical, high morals, has personal values, does what's right
- Interpersonal Skills – nice, personable, sense of humor, friendly, nurturing, empathetic, has self-control, patient, sociability, warmth, social skills
- Positive Attitude – optimistic, enthusiastic, encouraging, happy, confident
- Professionalism – businesslike, well-dressed, appearance, poised

- Responsibility – accountable, reliable, gets the job done, resourceful, self-disciplined, wants to do well, conscientious, common sense
- Teamwork – cooperative, gets along with others, agreeable, supportive, helpful, collaborative
- Work Ethic – hard working, willing to work, loyal, initiative, self-motivated, on time, good attendance

The skills mentioned by Robles (2012) and in the Employability Framework for Perkins are strikingly similar to those expressed as competencies by the National Association of Colleges and Employers (NACE). A recent article published by NACE demonstrates the disconnect seen between students' perceptions of career readiness skills and employers' experiences with new graduates. The article recounts the results of a recent poll of employers regarding recent graduates and their levels of proficiency on the NACE competencies. What they found is that employers tend to rate recent graduates lower in career readiness when compared with the student's own ratings. The difference between the two groups was greatest when asked about professionalism and work ethics; nearly 90 percent of students rated themselves as proficient in this area, but fewer than half of the employers agreed (NACE Staff, 2017). Although students may be able to get a job, keeping a job requires an understanding of what an employer wants or the company needs.

NACE defines competency as a "combination of observable and measurable knowledge, skills, abilities, and personal attributes" (Nunemaker et al., 2017). NACE outlines the following competencies as necessary for career readiness:

- **Critical Thinking/Problem Solving:** Exercise sound reasoning to analyze issues, make decisions, and overcome problems. The individual is able to obtain, interpret, and use knowledge, facts, and data in this process, and may demonstrate originality and inventiveness.
- **Oral/Written Communications:** Articulates thoughts and ideas clearly and effectively in written and oral forms to persons inside and outside of the organization. The individual has public speaking skills; is able to express ideas to others; and can write/edit memos, letters, and complex technical reports clearly and effectively.
- **Teamwork/Collaboration:** Build collaborative relationships with colleagues and customers representing diverse cultures, races, ages, genders, religions, lifestyles, and viewpoints. The individual is able to work within a team structure, and can negotiate and manage conflict.
- **Digital Technology:** Leverage existing digital technologies ethically and efficiently to solve problems, complete tasks, and accomplish goals. The individual demonstrates effective adaptability to new and emerging technologies.
- **Leadership:** Leverage the strengths of others to achieve common goals, and use interpersonal skills to coach and develop others. The individual is able to assess and manage his/her emotions and those of others; use empathetic skills to guide and motivate; and organize, prioritize, and delegate work.
- **Professionalism/Work Ethic:** Demonstrate personal accountability and effective work habits, e.g., punctuality, working productively with others, and time workload management, and understand the impact of non-verbal communication

on professional work image. The individual demonstrates integrity and ethical behavior, acts responsibly with the interests of the larger community in mind, and is able to learn from his/her mistakes.

- Career Management: Identify and articulate one's skills, strengths, and knowledge, and experiences relevant to the position desired and career goals, and identify areas necessary for professional growth. The individual is able to navigate and explore job options, understands and can take the steps necessary to pursue opportunities, and understands how to self-advocate for opportunities in the workplace.
- Global/Intercultural Fluency: Value, respect, and learn from diverse cultures, races, ages, genders, sexual orientations, and religions. The individual demonstrates openness, inclusiveness, sensitivity, and the ability to interact respectfully with all people and understand individuals' differences.

Although NACE concerns itself with skills needed for success in college and beyond, these skills continue to be relevant to high school graduates as well. Both the Perkins Employability Skills Framework and the NACE competencies indicate a need for well-developed intra-and inter-personal skills in the workplace setting. It is important to note that this combination of skills and abilities is part of the definition because the combination is thought to lead to success for an organization, not only for the individual. This dual success is also something soft skills in the workplace and SEL have in common. Although there is a great deal of focus on individual skills and abilities, it is also important to utilize these skills across setting for individual and community benefit.

School-Based Social Emotional Learning Programs

Social emotional learning (SEL) is the process through which children and adults acquire and apply the knowledge, attitudes, and skills needed to understand and manage emotions, set and achieve goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions (CASEL, 2018). Competence in social emotional skills predicts success “in school, in the labor market, and in life” (Belfield et al., 2015, p.5). Direct intervention to increase student competencies in the area of SEL has economic benefit. Measuring the cost-benefit of SEL interventions can be complicated; however, demonstrating economic impacts is beneficial when a district or community is weighing whether or not to invest in programming for students. Belfield et al. (2015) demonstrated through the utilization of aggregate data from six school-based interventions, that for every dollar spent, a return of \$11 for the broader community was realized. Research points both to interpersonal skills (realistic goal setting, positive mindsets, self-control, emotion regulation, and coping strategies) and interpersonal skills (listening, communication, perspective taking, negotiation, and social problem solving) as needed for success (Domitrovich et al., 2017). Longitudinal research indicates that competence in these areas promotes success in key areas over time and that deficits in these areas are associated with poor outcomes over time (Domitrovich et al., 2017). Studies also document that interventions for SEL provide positive outcomes, which endure over time (Domitrovich et al., 2017).

During the early 1990s, it became evident that schools needed to address social and emotional learning (SEL) in order to help all students succeed. Research supported this idea; however, there was little legislative support for the idea of SEL. With the

adoption of No Child Left Behind, many educators were forced to decide between time for academics that would be part of a mandated assessment and used to judge their performance, and skills that many knew were also necessary for a successful future (Ferguson, 2016). However, SEL was included in the Every Student Succeeds Act in 2010, with language that mandated “instructional practices for developing relationship-building skills, such as effective communication” (Ferguson, 2016).

With the addition of language that supported SEL, educators were now faced with the task of defining and measuring this type of instruction for students. Gayl (2018) identifies ways that policy makers can integrate SEL into efforts to redesign accountability systems and points to several examples from states’ consolidated plans. One example is the “Profile of the South Carolina Graduate”, which states that upon high school graduation, students should have skills such as self-direction, global perspective, perseverance, and interpersonal skills (Gayle, 2018). State plans are recognizing the importance of SEL not only for elementary students’ growth, but also as necessary for life after graduation.

Although several states have moved to define the specific social-emotional skills that are deemed important for childhood and beyond, others have made strides in measuring outcomes for students. In 2015, several districts in California formed CORE as a partnership to improve student achievement through collaboration across its eight members: Fresno, Garden Grove, Long Beach, Los Angeles, Oakland, Sacramento, San Francisco, and Santa Ana Unified School Districts (West et al., 2018). The mission of these eight “core” districts was to increase, build, and maintain a comprehensive school improvement and accountability system that included innovation and collaboration. In

2013, CORE applied for a waiver from the US Department of Education that would allow flexibility in determining school success (West et al., 2018). Through this waiver, CORE implemented a new accountability system that included measures of social-emotional learning, growth mindset, self-efficacy, self-management, and social awareness (West et al., 2018). Although the success of the program is still under review, some conclusions can be made about the importance of measuring the characteristics of SEL. Studying social-emotional characteristics through the utilization of student surveys provides an opportunity to observe how these characteristics change over time and to make judgements about the effectiveness of school-based strategies (West et al., 2018). “Perhaps most importantly, it provides a setting in which to identify the supports needed to ensure that educators respond to the provision of data on SE skills in ways that help more students succeed in school and life” (West et al., 2018, p. 129).

The need for schools to focus on skills that lie clearly in the social-emotional domain comes not only from increasing pressure to perform well on measures of school success, but also on employers needs to have workers who are highly skilled in areas such as communication and leadership. Focus on social skills for the workplace can be found on the US Department of Labor’s occupational Information Network (O*NET) database. This database provides detailed descriptions of jobs and the skills needed for over 850 occupations. Examples of social-emotional skills, such as persistence and social awareness, are required for occupations across a wide variety of domains. “Knowledge and experience aside, employers want to hire rational, socially competent individuals who know how to manage themselves and play nicely with others” (Ferguson, 2016, p. 75).

Research across domains supports the need for competence in social-emotional skills for individual success. Social-emotional competence is fundamental to increasing students' postsecondary performances and completions, to enhancing workplace success, and for adult life outcomes including rates of incarceration, marital status, and levels of depression (Moffitt, 2011).

Social Emotional Competence in the Workplace

Elias et al. (1997) define social and emotional competence as “the ability to understand, manage, and express the social and emotional aspects of one’s life...” (p. 2). However, the authors do not stop there. They also include the importance of this ability to be applied successfully to learning, relationships, problem solving, and adapting to demands. Elias and his fellow authors also include self-awareness, impulse control, the ability to work cooperatively, and caring about oneself and others (Elias et al., 1997, p. 2). This definition shares remarkable similarities with the soft skills outlined by NACE.

Biesecker and Girma-Holton (2015), found that interest in social emotional learning (SEL) is “strong among nonprofits, foundations, educators and economists”. They cited a study by Belfied et al. (2015) that indicated the economic value of SEL is on average for every dollar spent there was a return of \$11 through academic achievement and health.

Estimating the financial benefit of having students and employees who are competent in social-economical skills is difficult. Studies that examine the cost-benefit of SEL programs and interventions caution readers that calculations cannot capture all the benefits of each intervention studied. For example, until recently, there has been a focus on how the development of social-emotional skills impact academic achievement, which

dwarfs the available research on the economic impact of these skills (Belfield et al., 2015). What researchers instead focus on is how social-emotional skills impact educational attainment and personal well-being, which in turn impacts economic outcomes (Belfield et al., 2015).

The increased interest in how to improve soft skills for the workplace comes as employers are spending more money than ever on recruiting in order to find candidates with well-developed social skills, including communication. This focus on social skills comes as companies have automated or outsourced many routine tasks. The available jobs often require workers to take on broader responsibilities that demand critical thinking, empathy or other abilities that cannot be automated and are harder to develop in new employees (Davidson, 2016).

One way in which competence in social-emotional skills benefits the workplace is through employee engagement. Engagement is the situation in which an employee feels invested in the work he or she does and reports good relationships with his or her peers and supervisors. Industry research indicates that employees who are engaged are more likely to stay with the company, improve the pace at which goals are achieved, and improve the quality of those results (Forck, 2014).

As the focus of the workforce has changed in response to the demands of a global economy, the skills needed to succeed have changed. The shift from an industrial economy to an information society and an office economy means that many jobs now place an emphasis on social skills such as integrity, communication, and flexibility (Zehr, 1998).

Supporting Students with Disabilities in Career Education Programs

School face continued pressure to demonstrate that students are college and career ready. The adoption of Common Core State Standards in 2010 ushered in a movement of increased rigor of content and skills taught (Wagner et al., 2016). This was preceded by the increased financing provided to schools through the 2009 American Recovery and Reinvestment Act, with the caveat that schools adopt rigorous college and career ready standards (Wagner et al., 2016). With this additional pressure, schools have turned to career and technical education (CTE) programs to increase positive student outcomes, particularly for students with disabilities. Research shows that students with learning disabilities who participate in CTE programs have lower dropout rates and higher levels of post-graduation income (Wagner et al., 2016).

Finding programs that support positive post-graduation outcomes for students with high incidence disabilities, such as learning or behavioral disabilities, is especially important. Research shows that students with high incidence disabilities, more so than their nondisabled counterparts, can experience volatility in employment following graduation (Rowjewski et al., 2014). Wagner, Newman, Cameto, Garza, & Levine (2005) report that young adults with learning and behavioral disabilities most often find employment in entry-level positions that pay minimum wage or that offer only part-time work. This may be especially true for female students identified with a learning disability. Several studies found that women are less likely than their male peers with disabilities to find employment (Gonzalez et al., (2011). Gonzalez, Rosenthal, and Kim (2011) attributed these disappointing outcomes to possible deficits in interpersonal skills, job-related academic skills, or a lack of specific vocational skills needed.

Under- or unemployment for individuals with disabilities can have significant lifetime impacts. In a longitudinal study by Ra and Kim (2016), findings were consistent with previous research which found that employment is correlated to quality of life. There is a critical relationship for individuals with disabilities between employment and quality of life. Meaningful employment allows individuals with disabilities to maintain independence and functionality and is consistently found to be one of the most powerful determinants of quality of life (Ra & Kim, 2016).

Knowing that employment is a powerful determinant for quality of life for individuals with disabilities and taking into account that young adults with learning or emotional disabilities may lack the intra-and interpersonal skills necessary to obtain and maintain employment, instruction in soft skills becomes of great importance for this population.

Adventure Based Learning

Adventure Based Learning (ABL) is defined by Cosgriff (2000) as, “the deliberate use of sequences adventure activities- particularly games, trust activities and problem-solving initiatives- for the personal and social development of participants” (p. 90). The technique assumes that individuals are more capable than they typically see themselves to be. Tasks are structures to appear insurmountable and may be perceived as high risk, physically or emotionally. However the reality is that through group problem-solving and personal challenge, participants learn to overcome self-imposed limits on their own abilities. By utilizing compelling tasks that require individuals to work together, participants become responsible for constructing their own learning (Priest & Gass, 2018).

ABL is focused on both the interpersonal, how individuals interact with others, and the intrapersonal, including concepts such as self-concept and self-efficacy (Stuhr, 2018). Appropriate sequencing of activities, facilitation of the activities, and processing of the activities are key to successful implementation of an ABL model (Stuhr, 2018). The use of debrief techniques is one of the most important aspects of ABL. The debriefing can occur any time before, during, and/or after the activity. This type of discussion allows for the lessons learned during the activity to transfer to everyday life (Stuhr, 2018).

Debriefing following an ABL activity is possibly one of the most important steps in the process. Participation in the activity itself allows for important opportunities for growth; however, it does not automatically include learning or skill building (Powers & Kirkpatrick, 2013). Some of the activities can bring up intense emotions, depending upon the interactions of the group, comfort level of participants, and overall level of difficulty. As stated by Powers and Kirkpatrick (2013), “A skillful facilitator is necessary in the debriefing to bring out a variety of experiences and to ensure that the minority opinion is heard as well as the majority” (p. 53). Typically, facilitators will have planned questions for each activity; however, flexibility is required due to the importance of discussing observations by the facilitators and students alike. Facilitators must be open to new interpretations by participants.

Although there are different models for the debriefing process, they are actually very similar in structure and goals. The founders of the Project Adventure curriculum stress the importance of the debriefing process. Debriefing is described as part of the “Adventure Wave” that happens as part of each activity (Panicucci, 2002). The

Adventure Wave consists of Briefing, which sets the stage for the activity, Doing, which is the actual execution of the activity, and Debriefing. Debriefing is described as the “critical step where students are given an opportunity to glean important learning from what they have done” (Panicucci, 2002, p. 168). In this model, the debrief is not just a discussion, but can also include discussions in pairs or smaller groups, talking the students through a visualization of the activity and its salient points, using manipulatives such as play dough or pipe cleaners, and journaling.

The Sunday Afternoon Drive Debriefing Model utilizes the metaphor that is its title in order to highlight the fact that the teacher or facilitator is the “co-pilot”, with the students taking the responsibility for the “drive to self-discovery” (Stuhr et al., 2015). In this model, initial guidance is given through the presentation of a topic, activity, or question, as well as some basic rules for the process. The students then take control, with the teacher re-entering only if the students veer too far off-topic, stop talking, or start to exhibit signs of frustration that are inhibiting the process (Stuhr et al., 2015).

There is also the Description, Interpretation, and Evaluation (DIE) Model (Bennett & Bennett, 2008). In this model, students Describe the game, Interpret their experience by reporting feelings they experience, and finally Evaluate what they have learned and how it applies to personal, interpersonal, and societal levels (Powers & Kirkpatrick, 2013).

The model for ABL has been around for decades. Walsh and Golins (1976) first described the Outward Bound Model, as founded by Kurt Hahn, which includes a unique physical environment, a unique social environment and a set of problem-solving tasks that create “a state of adaptive dissonance” (Walsh & Golins, 1976). A review of the

current day Outward Bound indicates that these ideas are still at the core of ABL. A quote attributed to the founder, Kurt Hahn, which speaks to the goals of ABL can be found on the Outward Bound website. “I regard it as the foremost task of education: to ensure the survival of these qualities: an enterprising curiosity, an undefeatable spirit, tenacity in pursuit, readiness for sensible self-denial, and above all, compassion” (Outward Bound, 2018). A description of the Outward bound approach indicates that learning can occur in almost any environment, such as a classroom or an outdoor adventure course. Additional critical elements include challenge, adversity, failure, success, and most importantly, the requirement that all participants contribute in some way to the problem-solving process (Outward Bound, 2018). Outward Bound indicates positive outcomes for participants. Course end evaluations for courses that are five days or longer in duration demonstrate that participants are more likely to be leaders in their communities, assist people who need help; accomplish their goals, believe in their ability to succeed; take responsibility for their actions, and participate in service to the community (Outward Bound, 2018).

A contemporary of Outward Bound is Project Adventure. Project Adventure is an international nonprofit that was founded by former Outward Bound instructors. It was created because the founding members saw experiences gained through Outward Bound as powerful, but something not accessible to all who may benefit from adventure based learning (Panicucci, 2002). Project Adventure’s curriculum was developed as a supplement to a school’s current physical education program. It is also based on Kolb’s learning theory model which includes four phases; concrete experience, reflective observation, abstract conceptualization, and active experimentation (Panicucci, 2002).

Project Adventure utilizes the terms experience, reflect, generalize, and apply, which they state allows for learning and application of social and emotional skills (Project Adventure, 2018).

This model of experiential learning is utilized across a wide variety of educational, professional, and vocational environments. ABL has been shown to decrease fatigue and increase self-efficacy among childhood cancer survivors (Li et al., 2018), to increase engagement and intrinsic motivation among science students (Mackenzie et al., 2018), build strengths among juveniles in residential treatment (Nickerson et al., 2004), to enhance personal growth in psychology students (Human, 2004) and increase personal and group development among first year undergraduates (Bobilya & Akey, 2002). ABL can include a wide variety of activities from in-class problem-solving, to outdoor activities, to low- and high-ropes courses, to finally to multi-day adventure activities that are typically very challenging.

Enhancing Social Emotional Competence Through Adventure Based Learning

According to Elias et al. (1997), “The social and emotional education of children may be provided through a variety of diverse efforts such as classroom instruction, extracurricular activities, a supportive school climate, and involvement in community service” (p. 2). ABL is a diverse group of lessons that can be utilized across many environments. ABL is focused both on the interpersonal, how individuals interact with others, and on the intrapersonal, including ideas such as self-concept and self-efficacy (Stuhr, 2018). Because of this, it aligns with the focus of many SEL interventions. ABL fits the need for SEL to emphasize social decision-making and problem-solving and encourages students to generalize these skills across settings.

There is evidence that ABL activities are not only an effective technique for education, but also a means to promote retention and generalization of skills. White (2007) studied students age 10-14 with emotional difficulties who participated in an ABL program that contained classroom, outdoor, and adventure components. Researchers gathered both qualitative and quantitative data, with the primary goal to observe gains in trust and social competence that transfer to the school environment (White, 2007). Through semi-structured interviews, 100% of students reported a highly successful experience. Data from the interviews indicated gains in self-confidence, perseverance, awareness of their own needs, ability to regulate emotions, and a deeper level of trust with the other ABL participants (White, 2007). Positive changes in student behavior were also noted across settings. Both secondary school staff and parents indicated improvements in school and home behavior and engagement (White, 2007).

Adventure programming improves functional behaviors such as communication or working as a group to solve a problem. Beneficial outcomes are both interpersonal and intrapersonal. Examples of effective outcomes expected from ABL include newly found confidence, improved self-concept, better reasoning skills, greater trust in others, increased sharing of decision-making, improved conflict resolution skills, and increased leadership abilities (Priest & Gass, 2018). ABL allows participants to understand concepts from a fresh perspective and apply this new understanding to real-life settings such as school or work (Priest & Gass, 2018).

Research has also suggests that the effectiveness of ABL techniques is based upon the same factors that promote effective learning in a traditional classroom. ABL activities typically consist of small class size, cooperative versus competitive environment,

communication of high expectations, the ability to build on success, and the creation of a culture that is supportive and positive (Riggins, 1986).

ABL techniques promote a healthy environment for learning. Doll, Brehm, and Zucker (2014) indicate that several ingredients are needed to create classrooms where all students can be successful emotionally, academically, and socially. These successful classrooms impart the belief that students can be successful, encourage responsiveness to the teacher and attention to the lesson, encourage students to have personal goals and problem-solve, have authentic and responsive relationships with teachers, promote positive and supportive peer relationships, and encourage family involvement (Doll et al., 2014). ABL techniques focus on promoting these same characteristics.

Program Evaluation in Schools

Due to increased demands for a highly skilled and prepared workforce, schools bear a greater responsibility to prepare students for college, career, and life. Schools have historically been judged by academic accomplishments measured through standardized testing. This type of measurement does not provide schools with everything they need to make sure they are preparing students adequately for the demands of life after graduation. Students need not only academic content and skills but also critical thinking and problem-solving, communication, and collaboration abilities. Social-emotional learning encompasses these types of skills. Competence in social and emotional skills will be needed not only for the individuals' success, but also for the continued growth of our democracy and economy (Bae, 2018).

Achieve, an independent, nonprofit education reform organization, which dedicates its resources to working with states to raise academic standards and graduation

requirements, improve assessments, and strengthen accountability, has also reported on the importance of soft skills. Achieve (2018) indicates that college and career readiness necessitates skills to communicate effectively, solve problems, use critical thinking, and analyze information and data. Of additional importance are skills such as collaborating, communicating, and presenting information. It has become necessary for states to prioritize the development of accountability systems that include robust indicators of career and college readiness. Designing systems that measure the effectiveness of teaching soft skills that promote employability is a challenge that school districts around the country are now trying to meet (Achieve, 2018).

SEL can be difficult to define and therefore difficult to measure. Biesecker and Girma-Holton (2015), who work with City Year, a non-profit that works in urban schools to help increase student success and decrease drop-out rates, expanded on the importance of evaluating programs, particularly those that purport to increase social-emotional competencies in students. In 2015, they studied the success of 3,000 AmeriCorps volunteers who supported students in grades 3-9 with tutoring, SEL programming, and afterschool activities. Biesecker and Girma-Holton (2015) found that they needed several years to develop tools that could help them to interpret the data collected. For example, in the first year their chosen assessment tool was helpful in providing a common language to stakeholders; however, since there were no norms for the chosen tool, it was difficult to know what constituted a “good” score. However, they found this helpful because it allowed them to refine their questions for evaluation, such as “How can we connect data from an assessment tool to interventions”? They moved to another tool, the Devereaux Student Strengths Assessment (DESSA). The information gathered through this tool

allowed the researchers not only to look at overall progress and compare scores to norms, but also to provide subscales that allow researchers to focus on specific skills. Through each year, they received feedback from stakeholders. By evaluating the program in this manner, they found that, “Within one school year, just over half of the students receiving the City Year SEL intervention are showing significant growth in overall SEL competence.” They attributed their success not only to the strength of the program itself, but also to the multi-year evaluation.

As exemplified by the work of the researchers who consulted on the City Year SEL program, evaluation differs from research because evaluation seeks to help stakeholders make decisions (Alkin, 2011). Evaluations in the early stages of a program enable stakeholders to highlight problems, including those with fidelity of implementation, and may give some early indications about program outcomes (Alkin, 2011).

Not only is there a general lack of systematic review of available ABL curricula, but there are also no known ABL curricula specifically geared toward addressing the needs of transition age (16-21 years old) students who will soon be entering college or the workforce. The primary goal of this research was to provide a review of a curriculum designed specifically for this population. ABL is a competency-based curriculum that is utilized in physical education (Stuhr et al., 2018). ABL is also used in settings such as adjudicated youth facilities, college settings, and the corporate world. Unfortunately, although many resource books on ABL provide lessons for various groups, none offers a specific curriculum for transition-age students that are aligned with competencies for college and career readiness.

Chapter 3

Method

This study used archival data collected in the course of a school-based intervention that was planned, implemented, and evaluated during the 2016-2017 school year in a regional career education center encompassing three secondary-level vocational-technical schools. The intervention utilized Adventure Based Learning (ABL) techniques to deliver instruction to transition-age students in soft skills for the workplace. Data were collected before, during, and following the implementation of the sequence of activities. The researcher/school psychologist received permission from school administrators to utilize data that were collected over the course of the study to address the research questions posed by this study. In accordance with school policy, information for parents was sent home and students were provided with the opportunity to opt out of the lessons prior to student participation.

The Rationale for the Program

During the 2015-2016 school year, the support team, consisting of school psychologists and social workers and the vocational school staff, became aware of an increased number of students who were experiencing significant academic, social-emotional, and behavioral difficulties at all three school locations. This increase led to a need for additional consultation and supportive services from the county-based support team, which included school psychologists and social workers. Typically, supportive services were provided through individual and small-group counseling sessions that pulled students from their classroom programs. Some of these counseling groups utilized ABL techniques.

The format of this traditional counseling program pulled students from various vocational programs (e.g., building trades, health careers, manufacturing, culinary arts, etc.), which grouped students who had no other contact in their school day. The support team and technical high school administration recognized that all students would benefit from direct instruction in social skills and other employability skills. Given the fact that a large number of students in one program were identified as having deficits in social skills, the support team for that location, the school psychologist and social worker, proposed utilizing a whole-class approach to delivering SEL instruction. The ABL lessons were sequenced and organized and a regular schedule for instruction was provided to the whole class. Given the setting for the program in a career and technical center, the program included a primary focus on increasing employability skills for all students.

By the end of the 2015-2016 school year, the vocational instructor reported a significant degree of satisfaction with the program and stated that one of the consequences of this scope and sequence of instruction was that this class demonstrated the highest amount of teamwork and collaboration of any of his previous cohorts of students. The instructor became an advocate to bring this instruction to the vocational high school as a whole. Provision of services to targeted classrooms was proposed for the 2016-2017 school year. The administration reviewed and accepted the recommendation for the new format of social skills for the workplace instructional delivery. Both the support team and the administration predicted there would be benefits to this approach. Increasing employability skills is a stated goal of vocational education. Developing a program that used some of the current adventure based learning (ABL) activities to

deliver social-emotional learning (SEL) content provided for a smoother transition for staff that was already providing this type of instruction. By expanding this program offering to general education students, as well as students who received special education supports, facilitators are better able to mirror the diversity of the real-world work environment. Expanding the program was also better aligned with federal regulations that include instruction be delivered to students with disabilities in the least restrictive environment (LRE).

Description of the Program

The development of the IMPACT (Initiative, Managing emotions and conflict, Professionalism, Action toward goal setting, Communication, Thinking skills) program was propelled by the need for the social-emotional learning (SEL) program for transition-age students who attend a vocational high school located in the Northeast United States. IMPACT was built to be consistent with *Adventure Curriculum* from Project Adventure, with some activities being modified and others incorporated from other sources. All activities were chosen with the target competencies in mind. Previous services for students with disabilities included some SEL instruction; however, the delivery model was based on individual need, and not what best fit the overall needs of the vocational high school population.

Input into the development of the IMPACT program, the curriculum that is the focus of this study, was given by a team of transition-age educators that included school psychologists, social workers, and secondary educators. Each lesson is based on a NACE competency and includes an adventure based learning activity, materials needed,

questions designed to elicit discussion and debriefing recommendations to ensure that the discussion remains on the focus of the lesson.

The school psychologist and social worker assigned to one of the buildings in the career and technology high school created the scope and sequence of the IMPACT program by creating a grid that contained the target soft skill competencies and the lessons from ABL resources. Through collaboration and discussion, the school psychologist and social worker decided which lessons and conversation questions best matched the targeted skills. The collaborators also ensured that each targeted soft skill had multiple representations in the scope and sequence of the lessons.

The goal of the IMPACT program is to increase soft skills, such as communication, collaboration, and goal setting, among students who attend vocational high schools. These soft skills, which are based on competencies set forth by NACE, constitute “career readiness” and are in high demand by employers (NACE, 2018).

Program Staff

All support team facilitators, which includes three school psychologists and two social workers, received an initial two-day training on ABL techniques and low ropes course facilitation by staff from the Adventure Guild. The two-day training included recognizing safety concerns, such as environmental and participant issues that may impact safety, as well as direct instruction for staff related to activities on and off the low ropes course. Special attention was given to engagement techniques as well as safety concerns that may arise from the physically challenging lessons. Following this initial two-day training, facilitators were and will be re-certified every two years with a one-day refresher training.

Additional staff, such as learning support teachers, para-educators, and vocational instructors, who teach course-specific career skills, receive a preview of the program by the support team facilitators. These additional personnel are the primary staff assigned to sites in the regional vocational high schools. Although these team members participate in the instruction and debrief for each lesson, they are not responsible for direct facilitation of the lessons or the physical elements on the low ropes course. Vocational instructors whose class is chosen to participate during a given school year may never have seen the material outside of the general preview given. In this way, vocational instructors can be participants in the problem-solving process, which gives them an opportunity to step out of their typical teaching role.

Curriculum

A preview of the purpose, lessons, and sequence was provided to all school instructors before classroom selection. The preview consisted of the rationale behind providing the instruction, such as employers' desires to hire individuals with strong soft skills, how utilizing ABL techniques improve the targeted soft skills, the structure of the lessons, and the purposed sequence and scheduling of the lessons. Time was allotted for a large group meeting for questions and answers. Instructors were then encouraged to contact the facilitators with any other individual questions as well as to discuss their interest in participation with administration.

At one of the locations, the instructor with whom the program was piloted during the 2015-2016 school year was available for input into how IMPACT provided positive learning outcomes for his students. This same instructor also gave feedback during a staff

meeting that included all the vocational high school locations, which occurred before the preview of the program to individual locations.

Each lesson included a problem that needed to be solved by the class as a whole or by smaller groups, which depended on the lesson and the class size. Materials needed for each lesson varied. Materials included items such as large “stones” made from Styrofoam and duct tape, rubber circles used to denote specific areas where students had to step, paper and pencil, foam balls, rubber bands, plastic cups, and other various materials that may not have obvious use to the students. The students were then given a brief set of instructions that were purposely vague, allowing students to be creative in their problem-solving process. Students were encouraged to ask questions throughout the lesson (Appendix A).

An important aspect of the learning process is that most lessons require multiple attempts with varied strategies to reach the goal. Throughout this process, facilitators offer encouragement and observations of student behavior. If needed, students are given clues that may help them to complete the task more efficiently. This is typically done for two reason; the first is in the interest of time and the second is the possibility of student frustration that may be about to reach a level that is not helpful to learning the concepts of the lesson. All lessons are designed to have elements of difficulty; however, sometimes it becomes apparent that the level of difficulty for the particular class is either under or overestimated by the facilitators. When the tasks prove too challenging for the students, facilitators will make modifications or give clues. Adjusting the level of difficulty is done to encourage engagement of all students in the activity. If some students

find the task well above their conceptual level, there is a risk that they will not participate and therefore will not internalize the targeted soft skills of the lesson.

Conversely, if students reach the intended goal very quickly, they may attain a false sense of competence, when in reality the quick conclusion was due to an underestimation of the skill levels of the students. There are several ways in which the level of difficulty for each lesson can be modified. For example, if students are demonstrating difficulty in solving a particular task, a suggestion is made to have one participant be a leader or to change their perspectives. Also, if the students complete the task very quickly, additional elements can be added such as blindfolding some participants or allowing only non-verbal communication for the group.

Once the goal has been reached, the facilitators then lead the students in a discussion of the activity. Topics for discussion always include the two leading questions: “What worked?” and “What didn’t?” From this starting point, the facilitators listen to the student responses and encourage them to think about how this applies to a workplace setting. Some students can reference their past experiences working in a part-time job. Other students may have very little work experience but are encouraged to think about their chosen vocational fields or examples from the classroom. If communication is difficult for the group, the students are asked to think about how that could impact them on a job site. If students became stuck on one strategy for a solution, despite there being a more efficient approach, questions are posed regarding how this can limit their success in the workplace.

The participation of the teachers and technical education instructors is vital to helping students generalize these soft skills across settings. The teachers and instructors

provide valuable insight into how the students performed during the specific lesson and how that performance is similar or different from what the instructor observes in the classroom or on the job site. Technical education instructors, who come from the various vocational fields, provide awareness about how the target soft skills are needed for the specific vocational environment.

Some discussion questions target how a specific soft skill can impact a specific vocational environment. For example, following the activity, “Never Have I Ever...” students are encouraged to reflect on how learning about what they have in common with new coworkers or individuals who appear different from them can increase collaboration in the workplace.

Conversely, students are also asked to think about how some experiences or interests may not be appropriate in a workplace setting. The particular vocation can influence appropriate topics, or even amount, of conversation. There is likely more opportunity for talking about what someone did on his or her vacation in a setting where co-workers may be seated next to each other on computers or draft tables for most of the day, versus the hustle and bustle of a kitchen. Students are also prompted to reflect on how the diversity of their coworkers may influence conversation, tone, physical and emotional boundaries, as well as how they can learn to navigate differences in experiences and opinions.

At the end of the lesson, students are given the opportunity to provide brief feedback regarding what they learned during the lesson and give a rating of satisfaction (See Appendix B). The feedback provided allows the facilitators to monitor fidelity. For example, do the students agree that the lesson meets their goal of teaching the target

competencies? Student feedback could also inform the sequence of activities. If multiple ratings indicate dissatisfaction, the facilitators could ask for additional comments to obtain specific recommendations from the students on how to improve the lesson. If a particular activity is rated negatively across classes, it could be removed from the sequence the following school year and replaced with an alternate lesson that would continue to encourage learning and reflection of the targeted competency.

Finally, optional instructor-led lessons are included for the “off” weeks in the schedule. The activities are designed to address competencies such as communication and teamwork, but are shorter in duration and easier for vocational instructors to facilitate, with little or no training. For example, one of the lessons, “Salt and Pepper” requires only small sheets of paper that include easily matched separated pairs such as “Scooby” and “Shaggy” or “Bacon” and “Eggs”. These strips of paper are taped to students’ backs and they are instructed not only to figure out what is on their backs, but also match themselves to the other half of that pair. The focus of this lesson is effective communication.

All of the lessons led by vocational instructors are provided in advance by the support team facilitators. The support team prepare bags for each vocational instructor; these include the lessons, materials, and suggested soft skills discussion points. Although not all activities are utilized due to restrictions in instructional time, it becomes clear that certain lessons are preferred. The instructors favor lessons that are quick, hands-on, and require minimal materials.

Schedule

Due to the overwhelming interest of the faculty at the start of the 2016-2017 school year, a staggered schedule was created for facilitation at all three buildings that make-up the vocational high school. The schedule included a preview of content for the selected classes, a pre-test survey for both the students and instructors of the chosen classes, twelve lessons of direct instruction in soft skills competencies, a post-test survey, again for students and instructors, and finally a capstone experience at a low-ropes course.

The eight selected classes (four at Building 1, two at Building 2, and two at Building 3) were divided into two groups at each building so that the first set (Rotation 1) began instruction in October, and the second set (Rotation 2) began instruction in November. Each schedule included four weekly lessons, with four optional instructor-led lessons, alternating monthly. Rotation 1 received direct instruction from the support team facilitators during the months of October, December, and February. Rotation 2 classes received direct instruction by the support team facilitators during the months of November, January, and March. The support team also developed additional lessons that could be delivered by the vocational instructors. The instructors had the option of providing these lessons during the four weeks that their classes did not receive formal IMPACT instruction by the support team. It is important to note that there were only two classes at both Building 2 and Building 3; however, one class at Building 2 contained 44 students, so that class was broken into two sections. All field trips to the low ropes course, which provided a capstone experience for the participants, occurred in either April or May of 2017.

By utilizing a staggered schedule, the support team was able to serve more classrooms than had been originally anticipated. Additionally, providing briefer lessons as well as materials needed for each lesson to the vocational instructors for each classroom, encouraged ownership of the generalization of skills outside of the typical IMPACT time.

Setting

IMPACT was provided to high school students enrolled in a regional, three-building vocational high school. Each building contains both half-day and full-day programs that focus on specific career interests. The IMPACT program was presented only to selected full-day program students. In all, the vocational high school gives students the option of pursuing an education in 37 different vocations. Students who participated in the IMPACT program were enrolled in eight different vocational programs including Painting, Commercial Art, Computer Systems, Electrical Construction, Sheet Metal Technology, RV and Outdoor Power Equipment (small engines), Veterinary Assistant, and Commercial Construction. Many of these programs are geared toward preparing students to enter the workforce directly, following graduation; however, some programs also qualify for college credits.

On most occasions, the IMPACT lessons were delivered in the classroom setting, due to many programs being equipped with large “lab” areas. Vocational instructors use these lab areas as “hands-on” practice areas. Students use these areas to hone their hard skills, such as laying pipe, wiring electrical boxes, or painting doors. Building administration and instructors accommodated lessons that required a larger area by allowing the use of the hallways or common areas such as the cafeteria, or by utilizing

the outdoors when weather permitted. Some lessons, particularly those focused on teaching short- and long-range goal setting occurred with students working in pairs at tables or traditional desks.

Participants

During the 2016-2017 school year, a total of 181 senior students across three career and technical high schools, participated in the program. The regional career and technical high schools are located in the Mid-Atlantic and their enrollment comes from the surrounding local school districts. The students ranged in age from 17 to 20, with 64 female students and 117 male students. Sixty-nine of the 118 students were identified as students with a disability and in need of specially designed instruction.

Students who attend the career and technical high schools have an interest in a specific vocational field and are accepted following an application process. Acceptance is based upon a point system assigned to each applicant, based on their completed high school credits, grades, participation in half-day vocational programs, and recommendations of their sending district's teachers or school counselors. Each program offered at the career and technical high schools is specific to a vocational field of interest, such as, but not limited to, veterinary assistant, plumbing or commercial art. Students attend the schools for a full day, consisting both of theory and of application. Students who successfully meet all requirements in the spring are then encouraged to apply to businesses to complete internships that provide additional training and experience in the student's field of choice while working for a company. Following completion of all program requirements, students can receive certification of completion from the career and technical high school, in addition to professional certifications in their chosen

vocational fields. Diplomas are conferred by the sending school districts. The programs offered at the career and technical high school are highly specialized and are designed to prepare students to enter the working world directly following graduation, although some students do decide to pursue a post-secondary education.

Prior to the start of the IMPACT lessons, a letter explaining the program, as well as an option to opt-out of the lessons, was provided to each student to review with his or her parent or guardian. For the 2016-2017 school year, only two students opted out of the program. During the time the lessons were provided, the students were allowed to complete schoolwork at an alternate location.

IMPACT was offered to classrooms based upon instructor interest as well as administrator and support team recommendations. Instructors were given an opportunity to learn about IMPACT through a PowerPoint preview. Instructors at all vocational high school campuses saw the same presentation. The instructors then contacted administration regarding their interests in the program. The number of instructors who wished to participate in the lessons exceeded the capacity of the support team to deliver the program. It was determined that the support team could provide IMPACT to a total of eight classes. After receiving feedback regarding instructor interest, the support team and administrators discussed their recommendations. These recommendations included giving priority to classes who had a high proportion of students with disabilities. Preference was also given to instructors who were new to the technical high school.

Data Collection

After the classes were chosen, each student was asked to complete a survey (Appendix C) that required them to rate themselves on each of the NACE competencies.

The survey was developed by school psychologists and social workers who would be facilitating the lessons. Prior to student completion, a preliminary survey was reviewed by the support team supervisor, as well as the career and technical high school administration. Due to the varied reading levels of the students, all questions were read to the class as a whole and additional time for completion was offered to students as needed, regardless of whether or not they were students with an identified disability. Students were encouraged to ask questions as they completed the survey and all questions were answered by support team members in front of the class as a whole. This was done so that all students would receive the same information.

The student survey included 22 questions, most of which asked the students to rate themselves, using a Likert scale on various characteristics that corresponded to the NACE competencies. Each question included a section for comments.

After the surveys were completed, they were coded according to individual students and their respective classes, with each student assigned a number so that when they completed the post-survey, each student's responses could be compared. A corresponding instructors' survey was also completed (Appendix D). The data were entered into an Excel spreadsheet by the support team to be analyzed at a later time.

After the IMPACT lessons began, students were given the opportunity to respond to all lessons in a written, short answer regarding what they perceived as the primary goal of the lesson. They were also asked to indicate their satisfaction with the activity itself (Appendix B). The support team also coded these responses and entered the data into a separate Excel spreadsheet to be analyzed at a later time. The coding of individual responses was based upon the NACE competency that best fit the student's statement.

For example, if the student's written response was, "We had to work together to solve the problem", this was coded as Teamwork/Collaboration. If a student stated, "It worked when one person took the lead", that was coded under Leadership.

Finally, at the conclusion of the 12-week lessons, the students completed a post-survey in which they again rated themselves, based on the NACE competencies. The post-survey contained the same questions in the same order as the pre-IMPACT survey. Again, students were asked to rate themselves, using a Likert-type scale on characteristics that were based upon the NACE competencies. These ratings were then coded into an Excel spreadsheet to be analyzed at a later time.

An electronic survey (Appendix E) was also sent to all stakeholders for the IMPACT program; these included support team members, technical school principals, and participating instructors and learning support teachers. Students were not asked to complete the electronic survey. Of the 24 individuals who were sent the survey, 19 responded. The purpose of the survey of stakeholders was to gain information regarding what teachers, vocational instructors, administrators, and facilitators liked or disliked about the program in regard to the structure of the lessons themselves, the materials used, sequencing of activities, as well as how the lessons coordinated with the stated goals of the IMPACT program.

Development of the pre-and post-survey. The survey was developed in partnership with the support team members. It was then reviewed by the supervisor for the team and administrators of the vocational high school. The items needed to have face validity for the instructors and students and were intended to mirror the content of the NACE competencies. Both the staff and student survey needed to be as succinct as

possible to encourage the use of class time for the student responses and preparation time for the instructors to complete responses for each student.

A Likert-style format was chosen for most of the questions because it allows a researcher to measure emotions, opinions, or perceptions in degrees. Some questions allowed for multiple responses when asking respondents' reactions to specific everyday situations, such as being frustrated with a task. A multiple response format avoided a "forced choice" where respondents would have to choose their most likely response. Allowing for multiple options encouraged students to give all possible responses to a real-life situation.

Development of the student feedback form. Students were also asked to complete a feedback form following the ABL lesson. Students were asked to write a sentence that indicated what they learned from the lesson. They were also able to give a rating of satisfaction by circling one of three pictures. Choices included a picture of a "thumbs up" indicating satisfaction; a picture of a "thumbs down" indicating they did not like the lesson, and a "sideways thumb" indicating that the student liked some aspects of the lesson and disliked others. Students were verbally encouraged to explain their choices. This form allowed for qualitative responses to better understand participants' experiences and perceptions (Alkin, 2011).

Development of stakeholder survey. The stakeholder survey contained twelve questions that varied in format (Appendix D). One question asked the respondents to indicate their professional roles; four questions were multiple choice; five questions asked for stakeholders to rate various aspects of the program on a Likert-style scale, and two questions asked for short answer responses. The support team collaborated to create

the stakeholders survey to understand how the IMPACT program benefitted students and staff. The support team reviewed the responses to determine any modifications to the IMPACT program that would allow it to better meet the staff and student needs.

Overview of Research Design

A mixed methods design was utilized because both qualitative and quantitative data were collected and analyzed to address the research questions. Instructors, learning support teachers, administrators, and support staff who were part of the vocational high school faculty during the 2016-2017 academic year and who participated in the IMPACT curriculum were asked to contribute to the data gathering process. Data collection included a pre- and post-survey for the student and faculty participants as well as a follow-up stakeholders' survey regarding the perceptions of fit for the program goals. Student participants were asked for qualitative feedback in the form of short-answer responses after most of the lessons.

The pre- and post- participation surveys for both teachers and students were analyzed, using comparative and descriptive statistics. Although descriptive statistics were also used, the short-answer student responses and the stakeholders' survey were analyzed for themes that apply to the research questions.

Research into ABL techniques used to teach social-emotional concepts that are important to the transition to college and career is important because it establishes credibility for the ABL method. Research does exist across disciplines on the use of ABL techniques; however, a specific review of curriculum helps to refine practitioners' understanding of how and why ABL works, and allows stakeholders to examine how and

if behavior change transfers to a participant's everyday life and how change is sustained (Priest & Gass, 2018).

Research Questions

1. Do students report an increase in their use of soft skills?
2. Do instructors report an increase in students' use of soft skills?
3. Do students report an increase in their use of adaptive skills in response to difficult situations?
4. Is there a difference in the use of soft skills between students who receive specially designed instruction and those who do not?
5. What are stakeholders' perceptions of the IMPACT program?

Chapter 4

Results

The purpose of this study was to examine the outcomes of a school-based program for increasing soft skills for twelfth grade students enrolled in a career and technical high school. Student participants were enrolled in various classes that focus on specific areas of technical skills needed in order to graduate and gain employment in that area of vocational interest. Students completed pre- and post- surveys in order to measure their perceived use of soft skills. Students also completed feedback forms following each lesson in order to measure student satisfaction.

Instructors whose classes participated also completed pre- and post-program surveys in order to assess observed increases in students' soft skills. Instructors, administrators, and support team members also completed an electronic survey examining various aspects including program goals, appropriateness of materials and lessons, benefits to stakeholders, as well as recommendations for future implementation.

This chapter presents data related to the program. The chapter begins with a presentation of demographics for both students and instructors, followed by data associated with each of the research questions. A total of 181 students participated across three buildings. All the three buildings are part of a vocational high school located in the mid-Atlantic region of the United States. Each building contains different vocational programs, with student assignment to a building based on his or her choice of vocational program. Students in vocational programs participated as a whole class and programs were chosen based on a combination of demographics, teacher interest, and administrator

recommendation. Table 1 provides demographic data regarding students who participated in the program.

Table 1

Student demographics

Location	Programs	Gender		Program		Totals
		Male	Female	Special Needs	General Education	
Building 1	Painting	14	0	8	6	14
	Commercial Art	11	10	9	12	21
	Electrical	18	0	7	11	18
	Computer Sys.*	19*	0*	4*	15*	19*
<i>Total Bldg 1</i>		62	10	28	44	72
Building 2	Construction	15	2	9	8	17
	Sheet Metal	20	3	8	15	23
<i>Total Bldg 2</i>		35	5	17	23	40
Building 3	Small Engines	22	0	6	16	22
	Veterinary Asst	1	46	21	26	47
<i>Total Bldg 3</i>		23	46	27	42	69
Total All Bldgs		120	61	72	109	181

*Indicates data were not used in statistical calculations due to a lack of returned surveys.

Instructor demographics

Instructors who participated in this program were employed at the same career and technical high school. Seven instructors were male, with two female instructors who teach in the Veterinary Assistant program. Additionally, seven instructors were employed at the technical high school for five or more years, and two instructors, for the small engines program and the electrical program, were new to teaching in 2016-2017.

Sources of Data

As noted previously, student surveys, teacher surveys, and a stakeholder survey completed by faculty, administrators, and program staff were used to address research questions for the study. Table 2 outlines specific sources of data for each of the research questions.

Table 2

Sources of Data

Research Question	Source of Data	Analysis
1. Do students report an increase in their use of soft skills?	Student survey, pre/post comparisons of items # 1, 2, 3, 4, 5, 7, 8, 9, 12, 14, 15, 16, 17, 18, 19, and 20	Descriptive data, pre/post paired differences, t-test
2. Do instructors report an increase in students' use of soft skills?	Teacher survey, pre/post comparisons of items # 1-16	Descriptive data, pre/post paired differences, t-test
3. Do students report an increase in their use of adaptive skills in response to difficult situations?	Student survey, pre/post comparisons of items # 6, 10, 11, and 13	Descriptive data, pre/post paired differences, t-test
4. Is there a difference in the use of soft skills between students who receive specially designed instruction and those who do not?	Student survey, pre/post comparisons of items # 1, 2, 3, 4, 5, 7, 8, 9, 12, 14, 15, 16, 17, 18, 19, and 20 x Special Education status (column G)	Descriptive data, pre/post paired differences, t-test
	Teacher survey, pre/post comparisons of items # 1-16 x Special Education status (Column G)	
5. What are stakeholders' perceptions of the IMPACT program?	Stakeholder survey, questions 1-10 Student feedback form half sheets	Frequency counts, Descriptive data, qualitative data

Workplace competencies

Student responses to pre- and post-surveys were used to determine their use of skills and strategies to address workplace issues. The student survey form was designed to address specific competencies that have been identified by NACE as being critical for success in the workplace. Table 3 organizes the survey questions according to the competencies and strategies of focus for the IMPACT program.

Table 3

Workplace Competencies and Corresponding Student Survey Questions

Competencies	Questions
Critical Thinking/Problem Solving	<p>7. How often do you take your time to think about a task or question before answering?</p> <p>8. How often can you find more than one solution to a problem?</p> <p>9. How often do you use the following strategies when solving a problem?</p> <p>9a. Brainstorming</p> <p>9b. Research other ways to do a task</p> <p>9c. Ask for input from others</p> <p>9d. Look for a “work-around”</p> <p>9e. Change environments</p> <p>9f. Take a break</p> <p>9g. Go help someone else with something they are working on</p> <p>16. How often, after you make a mistake, do you take the time to look back and learn from what happened?</p>
Oral/Written Communication	<p>4. How often do you share your ideas with other people?</p> <p>19. How comfortable are you at talking about the things you are good at?</p> <p>20. How comfortable are you at talking about things you would like to improve?</p>
Teamwork/Collaboration	<p>1. How often do you work well with others to get a job done?</p> <p>2. How often do you work well with others who have different skills or personal characteristics from you?</p> <p>5. How often do you have difficulty working with others to get a job done?</p>
Leadership/Initiative	<p>15. How often are you able to recognize a different point of view and use compromise to meet a shared goal?</p> <p>21. How often do you take a leadership role in a group project?</p>
Professionalism/Work Ethic	<p>12. How long does it take you to get back your focus after a set-back?</p> <p>17. How often do you apologize after you have hurt someone’s feelings?</p> <p>18. How often are you on time for work?</p>

- Career Management
- 3. How often do you ask for help when you need it?
 - 14. How often do you complete tasks on time?
 - 19. How comfortable are you talking about the things you are good at?

Research Question 1: Do students report an increase in their use of soft skills?

Comparisons of pre- and post- items numbers 1, 2, 3, 4, 5, 7, 8, 9, 12, 14, 15, 16, 17, 18, and 19 were analyzed to make this determination. Table 4 presents paired comparisons of this set of pre- and post-survey questions.

Table 4

Pre-Post Comparisons for Research Question 1

Question	Paired Difference	Mean	df	t	Sig.
How often do you work well with others to get a job done?	Pre 1-Post 1	-.022	133	-.345	.730
How often do you work well with others to get a job done?	Pre 2-Post 2	-.120	132	-1.443	.151
How often do you ask for help when you need it?	Pre 3-Post 3	-.0821	133	-.759	.449
How often do you share your ideas with other people?	Pre 4-Post 4	-.097	133	-.955	.341
How often do you have difficulty working with others to get a job done?	Pre 5-Post 5	-.144	131	-1.305	.194
How often do you take your time to think about a task or question before answering?	Pre 7-Post 7	.046	130	.525	.601
How often can you find more than one solution to a problem?	Pre 8-Post 8	-.1692	129	-2.394	.018
How often do you complete tasks on time?	Pre 14-Post 14	.0644	131	.836	.405
How often are you able to recognize a different point of view and use	Pre 15-Post 15	-.1541	132	-1.629	.106

compromise to meet a shared goal?					
How often, after you make a mistake, do you take the time to look back and learn from what happened?	Pre 16-Post 16	-.053	132	-.550	.583
How often do you apologize after you have hurt someone's feelings?	Pre 17-Post 17	.008	132	.063	.950
How often are you on time for work?	Pre 18-Post 18	.165	132	1.920	.057
How comfortable are you at talking about the things you are good at?	Pre 19-Post 19	.000	130	.000	1.00
How comfortable are you at talking about things you would like to improve?	Pre 20-Post 20	-.1038	129	-.975	.332
How often do you take a leadership role in a group project?	Pre 21-Post 21	-.0423	129	-.458	.648

Overall, there were limited significant differences in student self-report between reported uses of soft skills prior to participation in the IMPACT program, compared with student use of soft skills following completion of the IMPACT program. Question eight asked students how often they could find more than one solution to a problem. The paired t-test showed that there was a significant difference between the pre-IMPACT levels of solution finding compared with the post-IMPACT levels, $t(129) = -2.394, p = .018$. Additionally, Question 18 asked students how often they are on time for work. The difference between the means is approaching significance, $t(132) = 1.920, p = .057$.

Research Question 2: Do instructors report an increase in students' use of soft skills?

Items 1 through 16 of the teacher pre- and post- surveys were used to answer this question. Table 5 organizes these questions based on association with workplace

competencies. Each item asked teachers to use a 1-5 scale to indicate the frequency with which a student uses a specific strategy; 1 indicated "not at all" and 5 indicated "all the time."

Table 5

Workplace Competencies and Corresponding Teacher Survey Questions

Workplace Competencies	Survey Questions
Critical Thinking/Problem Solving	4. Obtain information needed to solve a problem 5. Analyze information 6. Use information creatively
Oral/Written Communication	7. Shares their ideas with the group
Teamwork/Collaboration	1. Work cooperatively
Leadership/ Initiative	8. Recover from difficult situations 9. Negotiate and manage conflict 16. Adopt a leadership role within the classroom
Professionalism/Work Ethic	3. Professional language 10. Demonstrates personal accountability 11. Changes behavior in response to critiques or feedback 12. Arrives to work on time and completes assignments on time 13. Demonstrates effective work habits
Career Management	2. Advocate for their needs 14. Identify personal strengths 15. Identify areas of weakness

Vocational instructors whose programs involved students who participated in IMPACT completed pre- and post- IMPACT surveys. Their responses indicated increases in observations of some of the soft skills targeted by the program. Table 6 presents the instructors' responses for the pre-and post- teacher survey questions, with paired t-test comparisons.

Table 6

Pre-Post Comparisons for Research Question 2

Question/Competency	Paired Sample	Mean	df	t	Significance
Work cooperatively (build relationships with diverse individuals)	Pre 1- Post 1	.079	126	.827	.410
Advocate for their needs (ask for help when needed and initiate interaction)	Pre 2-Post 2	-.079	125	-.821	.413
Professional language (use professional tone and content when speaking to both peers and supervisors)	Pre 3-Post 3	.0906	126	1.101	.273
Obtain information that may be needed to solve a problem (find information when needed)	Pre 4-Post 4	-.0984	126	-1.088	.279
Analyze information (interpret and utilize knowledge)	Pre 5-Post 5	-.1520	124	-1.855	.066
Use information creatively (demonstrates originality and inventiveness)	Pre 6-Post 6	-.288	124	-3.830	.000
Shares their ideas with the group (communicates relevant information to the group)	Pre 7-Post 7	-.183	125	-2.034	.044
Recover from difficult situations (manage their emotions while completing required tasks)	Pre 8-Post 8	-.202	123	-2.151	.033
Negotiate and manage conflict (recognize others' strengths and use empathy to work toward a common goal)	Pre 9-Post 9	-.407	122	-4.630	.000
Demonstrate personal accountability (demonstrates ethical behavior and understands that their behavior impacts others)	Pre 10-Post 10	-.0363	123	-.429	.669
Changes behavior in response to critiques or feedback (learns from their mistakes)	Pre 11-Post 11	-.135	125	-1.740	.084
Arrives to work on time and completes assignments on time (punctuality and time management)	Pre 12-Post 12	.0595	125	.691	.491

Demonstrates effective work habits (demonstrates organization and ability to prioritize)	Pre 13-Post 13	-.0200	124	-.239	.811
Identify personal strengths (able to articulate their skills knowledge and experience)	Pre 14-Post 14	-.331	123	-3.705	.000
Identify areas of weakness (identify areas in need of skill or professional growth)	Pre 15-Post 15	-.312	124	-3.907	.000
Adopt a leadership role in the classroom (use empathetic skills to guide, motivate, and delegate work)	Pre 16-Post 16	-.290	123	-2.754	.007

Question six asked instructors to rate students' creative uses of information, which is related to the competency of Critical Thinking. Instructor responses indicated a significant difference between the pre-IMPACT and Post-IMPACT student skills, $t(124) = -3.830, p = .000$. Additional evidence of significant differences between pre-IMPACT and post-IMPACT levels of instructor observed student soft skills are found in question seven, $t(125) = -2.034, p = .044$; question eight, $t(123) = -2.151, p = .033$; question nine, $t(122) = -4.630, p = .000$; question 14, $t(123) = -3.705, p = .000$; question 15, $t(124) = -3.907, p = .000$; and question 16, $t(123) = -2.754, p = .007$.

The mean responses to each question were compared according to program. No post-surveys were provided by the small engines or the computer systems program, so they are not included in this tabulation. Data indicate that there are significant differences between programs and reported improvement by question. Table 7 rank orders the responses by program and survey question. For example, if the painting program is

number 1, the highest ratings are reported for that question. Overall, students in the painting program tended to be ranked comparatively higher on a number of the survey items.

Table 7

Student Rankings by Program, Based on Teacher Surveys

Question	Rank Order
1. Work cooperatively	Painting, vet, sheet metal, commercial construction, electrical, commercial art
2. Advocate for their needs	Painting, vet, commercial construction, sheet metal, electrical, commercial art
3. Professional language	Sheet metal, commercial art, vet, painting, commercial construction, electrical
4. Obtain information to solve a problem	Painting, vet, commercial art, sheet metal, commercial construction, electrical
5. Analyze information	Vet, commercial construction, painting, commercial art, sheet metal, electrical
6. Use information creatively	Vet, painting, sheet metal, commercial art, commercial construction, electrical
7. Share their ideas	Painting, vet, electrical, commercial art, sheet metal, commercial construction
8. Recover from difficult situations	Commercial art, vet, sheet metal, painting, commercial construction, electrical
9. Negotiate and manage conflict	Painting, vet, sheet metal, commercial art, electrical, commercial construction
10. Demonstrate personal accountability	Commercial art, vet, painting, sheet metal, commercial construction, electrical
11. Change behavior in response to critique or feedback	Vet, painting, sheet metal, electrical, commercial art, commercial construction
12. Arrives to work on time and completes assignments	Commercial art, vet, sheet metal, electrical, painting, commercial construction
13. Demonstrates effective work habits	Commercial art, vet, painting, sheet metal, electrical, commercial construction
14. Identify personal strength	Vet, painting, commercial construction, sheet metal, commercial art, electrical
15. Identify areas of weakness	Vet, painting, commercial art, sheet metal, commercial construction, electrical
16. Adopt a leadership role	Painting, vet, electrical, commercial construction, commercial art, sheet metal

Research Question 3: Do students report an increase in their use of adaptive versus maladaptive skills in response to difficult situations?

Responses on student survey items 6, 10, 11, and 13 were analyzed to make this determination. These questions were divided into those that looked at the degree of growth in adaptive strategies and those that looked at a reduction in maladaptive strategies. Table 8 presents the survey questions utilized to address research question 3.

Table 8

Adaptive vs Maladaptive Strategies

Student Survey Questions Related to Adaptive Responses
<p>6. When something is not going well at school or work, how often do you use one of the following strategies?</p> <p>6f. Talk to a supervisor 6g. Ask a peer for help 6h. Use trial and error 6i. Look for missing information</p>
<p>10. How often do you use the following strategies to manage your anger in the workplace setting?</p> <p>10a. Walk away 10b. Ask for help 10c. Use relaxation strategies 10d. Engage in conflict resolution 10e. Count to 10</p>
<p>11. How often do you use the following strategies to manage your anxiety in the workplace setting?</p> <p>11a. Walk away 11b. Ask for help 11c. Use relaxation strategies 11d. Engage in conflict resolution 11e. Count to 10</p>
<p>13. How often do you respond in the following ways to critical feedback about your work?</p> <p>13a. Try to apply what was said 13d. Talk about it till you understand 13f. Ask a supervisor for help 13g. Ask for help from a peer who was successful</p>

Student Survey Questions Related to Maladaptive Responses
6. When something is not going well at school or work, how often do you use one of the following strategies? 6a. Cursing 6b. Arguing
13. How often do you respond in the following ways to critical feedback about your work? 13b. Get anxious 13c. Get angry 13e. Argue with the teacher or supervisor

Paired comparisons were done for pre- and post-survey responses by students to the questions related to adaptive and maladaptive strategies used to self-manage behavior in school or workplace settings. Table 9 displays the results of these paired comparisons.

Table 9

Pre-Post Comparisons for Research Question 3

Adaptive Question	Paired Sample	Mean	df	t	Significance
When something is not going well at school or work, how often do you use one of the following strategies?					
Talk to supervisor	Pre 6f-Post 6f	.000	129	.000	1.00
Ask a peer for help	Pre 6g-Post 6g	-.1008	128	-.759	.449
Look for missing information	Pre 6i –Post 6i	.031	129	.300	.764
How often do you use the following strategies to manage your anger in a workplace setting?					
Walk away	Pre 10a-Post 10a	-.015	132	-.127	.899
Ask for help	Pre 10b-Post 10b	-.0191	130	-.146	.884
Use relaxation strategies	Pre 10c-Post 10c	-.0947	131	-.778	.438
Engage in conflict resolution	Pre 10d-Post 10d	-.144	131	-1.365	.175
Count to 10	Pre 10e-Post 10e	-.2462	131	-2.294	.023
How often do you use the following strategies to manage your anger in a workplace setting?					
Walk away	Pre 11a-Post 11a	-.1353	132	-1.051	.295

Ask for help	Pre 11b-Post 11b	-.1260	130	-.963	.337
Use relaxation strategies	Pre 11c-Post 11c	-.2083	131	-1.451	.149
Engage in conflict resolution	Pre 11d-Post 11d	-.068	131	-.615	.539
Count to 10	Pre 11e-Post 11e	-.3385	129	-2.780	.006
How often do you respond in the following ways to critical feedback about your work?					
Try to apply what was said	Pre 13a-Post 13a	.083	132	.855	.394
Talk about it till you understand	Pre 13d-Post 13d	-.123	129	-1.055	.293
Ask a supervisor to help	Pre 13f-Post 13f	-.1654	129	-1.364	.175
Ask for help from a peer who was successful	Pre 13g- Post 13g	.023	129	.213	.832

Maladaptive

When something is not going well at work, how often do you use the following strategies?

Cursing	Pre 6a-Post 6a	-.1731	129	-1.361	.176
Arguing	Pre 6b-Post 6b	-.163	128	-1.351	.179
How often do you respond in the following ways to critical feedback about your work?					
Get anxious	Pre 13b-Post 13b	-.0885	129	-.733	.465
Get angry	Pre 13c-Post 13c	-.1154	129	-.999	.320
Argue with the teacher or supervisor	Pre 13e-Post 13e	-.2461	127	-2.686	.008

Students reported an increase in the skill of counting to 10 for managing both anger, $t(131) = -2.294, p = .023$, and anxiety, $t(129) = -2.780, p = .006$. Additionally, students reported a significant decrease in arguing with their teacher or supervisor, $t(127) = -2.686, p = .008$.

Research Question 4: Is there a difference in the use of soft skills between students who receive specially designed instruction and those who do not?

Both student pre- and post- IMPACT student surveys, as well as the instructor pre- and post- surveys were examined. Student pre- and post-IMPACT survey items 1, 2, 3, 4, 5, 7, 8, 9, 12, 14, 15, 16, 17, 18, 19, 20, and 21, along with special education status were utilized in order to answer this question. A total of 117 students, 51 students who

received specially designed instruction and 66 students who do not, completed the post-IMPACT survey. The post-student survey indicated that students who receive specially designed instruction reported small gains in soft skills; however, they remained significantly behind on several items surveyed. The following table organizes questions and test statistics for those that were found to be significantly different when the factor of special education is taken into account.

Table 10

Pre-Post Survey Comparisons by Student Educational Placement

Question	Special Education Mean	Regular Education Mean	Mean Square	Significance
6b. When something is not going well at school or work, how often do you use one of the following strategies? Anxiety	2.09	2.53	5.294	.023
9d. How often do you use the following strategies when stuck on a problem? Look for a “work around”	2.82	3.27	4.891	.029
13b. How often do you respond in the following ways to critical feedback about your work? Get anxious	2.961	2.523	3.916	.050
13e. How often do you respond in the following ways to critical feedback about your work? Argue with the teacher or supervisor	1.863	1.477	5.055	.020

Students who receive specially designed instruction reported having an anxious response more often than students who receive only regular education. Those who

receive specially designed instruction are less likely to “look for a work around” or think creatively to solve the problem. Students who receive only regular education services are not as likely to become anxious or argue when faced with critical feedback about their work.

Data of pre-and post-IMPACT instructor survey questions 1 through 16 compared students who receive special education (Pre-N=58; Post N = 52) with those who do not (Pre-N=71, Post-N = 73). The following table organizes the pre-and post-IMPACT tests of between subject effects for the teacher responses for each educational group.

Table 11

Sum of Squares Comparison by Student Educational Placement

Question	Pre-Mean Square	Pre-Significance	Post-Mean Square	Post-Significance
1. Work cooperatively	20.637	.000	1.991	.136
2. Advocate for their needs	12.250	.002	.319	.575
3. Professional language	7.727	.012	4.717	.036
4. Obtain information to solve a problem	17.260	.000	7.065	.012
5. Analyze information	17.328	.000	8.051	.006
6. Use information creatively	9.028	.003	4.054	.030
7. Shares their ideas	18.020	.000	2.082	.160
8. Recover from difficult situations	11.392	.001	9.906	.002
9. Negotiate and manage conflict	12.327	.001	8.719	.002

10. Demonstrate personal accountability	11.926	.002	6.576	.016
11. Change behavior in response to feedback	13.510	.000	7.584	.002
12. Arrives on time	6.682	.030	9.846	.003
13. Demonstrates effective work habits	11.992	.004	10.340	.001
14. Identify personal strength	9.294	.002	3.633	.031
15. Identify area of weakness	16.051	.000	4.824	.019
16. Adopt a leadership role	26.359	.000	6.206	.026

Table 11 demonstrates that differences in certain skills decreased between students who receive specially designed instruction and students who do not. Skills for students who receive specially designed instruction likely increased, to shrink the differences reported in the pre-IMPACT surveys. Students' ability to work cooperatively, advocate for their needs, and share their ideas became less different from their regular education counter-parts.

Research Question 5:

What are the stakeholders' perceptions of the IMPACT program?

Both the Stakeholders' Survey completed electronically at the end of the IMPACT program and the Student Feedback Forms completed after each lesson were used to answer this question.

Stakeholders Survey

A survey was sent to various stakeholders who participated in the IMPACT program. All respondents participated in the administration of the program in some way. Technical Instructors and Learning Support Teachers aided the Support Team members, who were primarily responsible for the instruction during the lessons. Administrators observed some of the lessons and were the primary authority behind the mandate to implement IMPACT across all buildings and in multiple classrooms. Respondents included the following: seven technical instructors, seven learning support teachers, three administrator, and two support team members.

Nineteen of 24 respondents completed the form for a 79.2 response rate. One respondent did not complete any of the questions asking to rate various aspects of the program, with the exception of the last question that asks to rate the consistency of IMPACT with the goals of Technical school.

Table 12 depicts the number and percentage of each response to the survey questions. Respondents could choose all that apply unless otherwise noted.

Table 12

Stakeholder Understanding of the Purpose of the IMPACT Program

Response	Number	Percentage
Increase students' skills for managing emotions	16	84.2
Increase students' skills for demonstrating professionalism	16	84.2
Increase students' skills for setting goals	13	68.4
Increase students' skills for taking initiative	15	78.9

Increase students' skills for communication	4	21.1
Increase students' skills for problem-solving	4	21.1
All of the above	1	5.3

Additional responses under “other” included, “To teach them much needed soft skills”, “To improve students’ soft skills that employers look for”, “Increase students’ perspective taking”, “Building relationships and community”.

Table 13

Stakeholder Responses who Benefits

Who benefits	Number	Percentage
Technical students	19	100
Technical instructors	18	94.7
Technical administrators	15	78.9
Sending school districts	14	73.7
Business owners	19	100
Learning support teachers	15	78.9
Support personnel	13	68.4
Parents or guardians	16	84.2

When asked how individuals benefited, some stakeholders responded with the following comments:

“Students are in better control of their actions and behaviors through the development of their social skills learned through the IMPACT program.”

“When students learn how to work with one another in a professional manner it benefits the whole community.”

“Students become more sure of themselves, come out of their shells, communicate more effectively and become more productive members of society, which impacts workplace, home, and overall community.”

One stakeholder responded that consistency was important to noticing positive effects in the areas mentioned.

Table 14

Stakeholder Responses of Increased Skills

Skill	Number	Percentage
Communication in the workplace	17	89.5
Problem-solving	18	84.7
Managing emotions	13	68.4
Professionalism	12	63.2
Set goals	13	68.4
Take initiative	15	78.9
No discernable effect	0	0

Stakeholders were also asked to rate the engagement level of the activities. The scale provided was a Likert-Type scale with ratings of one equaling, “Not at all engaging”, to ratings of five equaling, “Highly engaging”. The average response rating was a 4.5. This indicates that most respondents found the activities highly engaging.

Stakeholders were also prompted to rate the materials chosen for each lesson. Ratings were also presented in a Likert scale format. A rating of one equaled, “Not at all necessary” to a rating of five which equaled “Essential”. The average rating was 4.6. This indicates that stakeholders found the materials essential to the lessons.

Next, respondents were asked to evaluate the sequence of activities. A rating of one indicated that the sequence was not helpful at all, and a rating of five indicated the sequence was “Extremely helpful”. The average rating was a 4.2, indicating that stakeholders found the sequence helpful.

Stakeholders were also asked about level of agreement with the length of activities presented to the whole group. A rating of one indicated “Not at all agree”, and a

rating of five indicated that they were “Very much in agreement”. The average rating was a 4.5, indicating that they were very much in agreement with the length of activities.

Respondents indicated an overall satisfaction with the program, with the majority of stakeholders stating that they would change “nothing” about the IMPACT program.

Table 15 is a summary of their responses:

Table 15

Stakeholders’ Recommended Changes

What would you change about the IMPACT program?

Response	Number of Responses
Techniques for engagement	1 (5.3%)
Materials chosen	1 (5.3%)
Sequence of activities	1 (5.3%)
Length of lessons	2 (10.5%)
Nothing	12 (63.2%)

Under “Other” statements included, “IMPACT should go into all the programs”, “...some activities make it easy for the leaders to solve the whole game/puzzle and everyone else to take a backseat”, and “Consistency and partnership with instructors so that they play a more active role in the lessons”.

Finally, stakeholders were asked to rate using a Likert-type scale, how consistent the IMPACT program was with the goals of the Technical High School curriculum. Ratings of one meant that the goals were, “Not at all consistent” and fives indicated “Very consistent”. The average rating of 4.6 means that stakeholders rated the IMPACT program as “Consistent” to “Very Consistent” with the goals of the Technical School. It is important to note that the individual who gave the rating of “2” indicated that this rating reflected his/her belief that the IMPACT lessons should be offered to all classes.

Student Feedback Forms

Each of the students completed a student feedback form following each lesson. The forms gathered information regarding student satisfaction with each lesson as well as a brief open-ended response that asked what students learned. It is important to note that not all students completed a student feedback form following each lesson. The following chart summarizes the total responses for each lesson, based on the forms received.

A total of 1,744 responses were tabulated. The responses were sorted by lesson and by how many fell into each rating category. A “Thumbs Up” response indicated the student liked all aspects of the lesson. A “Thumbs Down” response indicated the student did not like the lesson at all. A “Neutral or Sideways Thumb” response indicated that the student liked some aspects of the lesson, but disliked others. There were a total of 864 “Thumbs Up” responses, 615 “Neutral” responses, and 615 “Thumbs Down” responses. Responses were quantified by assigning a numerical rating to each response. The following values were assigned to each rating: a “Thumbs Up” equaled three, a “Neutral or Sideways Thumb” equaled two, and a “Thumbs Down” equaled one. The ratings for each lesson were then averaged across all classes in which students provided a response. Table 16 summarizes the lesson averages.

Table 16

Average Lesson Rating

Lesson	Description	Average rating
Balloon Question	Balloons containing “Get to know you” questions are popped and answered by students	2.3
Build a Tower	Students create a tower out of objects such as balloons, cups, plates, and tape	2.4
Four at a Time	Students start in an line with two groups alternating position (girls/boys, hats/no hats, etc.) and must move all members of a group to one side	1.09
Four Corners	Four groups must cross to the opposite corner at the same time	2.32
Goal Setting	Students break down long-term personal goals into manageable steps	2.24
Juggling at Warp Speed	Students start in a circle with one ball tossed to individuals in a random order. Students must remember the order as more and more balls are added	2.55
Grid Walk	A path must be discovered and followed in order	1.79
Knowing Yourself	Students are given an increasingly smaller number of cards that they may keep that describe their most important values	2.25
Magic Carpet	A tarp placed for the entire class to stand on. They must flip the tarp to the other side while everyone is on it	2.07
Make a Recipe	Students list necessary skills and available supports to reach their goals	2.58
Minefield	Students are blindfolded and led by their partner, using only verbal clues, through an obstacle course	2.58
Mummy Wrap	Various relay races, including one where students are wrapped in head-to-two toilet paper are completed	2.23
My Adjectives	Students must work with classmates to trade in order to get a hand of five descriptor cards	2.49
Never Have I Ever	Similar to musical chairs, there is one less spot in the circle than there are students. Students describe something they have done and then race to claim a spot	2.70
Path Goal	Students create a path to a specific goal	2.17

Salt and Pepper	Students wear cards on their back that make up one half of a pair (i.e. bacon/eggs). They take turns describing their classmates cards till they find their pair	2.14
Snack Auction	Small groups of students compete to earn “money” by answering questions related to soft skills. The teams then must bid on snacks using their earnings	2.57
Stepping Stones	Students use Styrofoam “stones” to move as a group from one “island” to the next	2.36
Traffic Jam	Two groups of students line up on designated spots with one empty spot in the middle of the line. The groups must move following specific rules to switch sides	2.25
Two by Four	Students are separated into two groups arranged into a pyramid shape. They must move based on specific rules	2.45

Overall, students gave the highest positive ratings to Juggling at Warp Speed, Make a Recipe, Minefield, Never Have I Ever, and Snack Auction. Juggling at Warp Speed and Never Have I Ever are the first two lessons in the sequence. Make a Recipe asks students to list specific “ingredients” they need to meet a personal goal, Minefield is a highly active game, and Snack Auction involves team decision-making to “bid” on food items.

The least positive ratings were for Four at a Time, Grid Walk, and Magic Carpet. Students indicated that Four at a Time was repetitive when compared with the lesson from the previous week. Grid Walk was also described as similar in form and goal as the previous lessons. Many students described the Magic Carpet lesson as “uncomfortable”. This task required students to be in very close physical proximity to accomplish the group goal of the activity.

Chapter 5

Discussion

There are many challenges for recent graduates entering the job market. These challenges include a quickly changing job market, companies that recruit fewer students, and less time to learn the culture of a company due to cost-cutting that impacts job training (Salingo, 2017). The goal of the IMPACT program is to increase students' competencies for soft skills in the workplace setting. In a highly competitive economy, businesses are looking for employees who can problem-solve, take initiative on tasks, and get along with diverse co-workers. Teaching these skills is the focus of the IMPACT program, based on the competencies as outlined by The National Association of Colleges and Employers (NACE). Career readiness as defined by NACE (2018) is the attainment and demonstration of defined competencies that broadly prepare graduates for transition to the working world. This chapter highlights the successes of the IMPACT program at delivering instruction in these competencies. Limitations of the study as well as implications for practice are also discussed.

Summary of Findings

Post-IMPACT surveys completed by instructors indicate gains across several competencies. Survey questions that examined skills for career management, managing emotions, work ethic, and critical thinking were either significant or approaching significance. Instructor post-surveys indicated improvements in nine of sixteen questions. Specifically, reported increases included the ability to analyze information, demonstrate inventiveness or creativity, share their ideas with the group, recover from difficult

situations, manage conflict, learn from mistakes, identify personal strengths, identify skills that need improvement, and motivate others as leaders.

Pre-survey item responses indicate that at the beginning of the program instructors reported that students who receive specially designed instruction demonstrated use of soft skills well below that of same grade peers. All of the students demonstrated gains in their use of soft skills as evaluated by instructors; however, observed skills for students who receive specially designed instruction remained below that of same grade peers. Students who receive specially designed instruction continued to demonstrate skills below that of their peers for the following competencies: critical thinking, managing emotions, professional work ethic, career management, and leadership. For example, students were less likely than their non-identified peers to use professional language, obtain and analyze important information, recover from difficult situations, manage conflict, demonstrate personal accountability for their actions, change their behavior in response to feedback, demonstrate effective work habits, identify personal strengths and needs, or adopt a leadership role.

Students also indicated areas of significant differences between students who receive special education services and those who do not, in response to post-survey questions. Again, although gains were made based on improvement in mean responses, students who receive special education services continued to be more likely to argue when a task or interaction is not going well, less likely to look for alternative problem-solving strategies, and more likely to get anxious or argue in response to critical feedback. This is similar to some of the instructor observations that indicated a need to increase skills for critical thinking and managing emotions. These responses indicate that

students who receive specially designed instruction may benefit not only from practice with varied problem-solving strategies, but also with increased direct instruction in adaptive coping strategies.

The stakeholder survey completed by instructors and staff indicated an overall positive impression of the program. Stakeholders reported that IMPACT improved students' skills across targeted competency areas. Instructors indicated the best match between the IMPACT program and targeted competencies included the focus on communication in the workplace, problem-solving strategies, and helping students to take initiative in workplace situations. It was stakeholders who reported the largest benefits of the program for students, instructors, and business owners. Those surveyed also rated IMPACT as "Consistent to Very Consistent" with the goals of the Technical School. Positive perceptions among stakeholders such as instructors and administrators are important to program longevity. For example, when implementing a school-wide Positive Behavior Intervention and Supports (PBIS), McDaniel et al. (2017) found that administrator support and teacher buy-in is necessary for successful implementation. This is of utmost importance at the secondary level where it is harder to positively reinforce student behaviors. A "framework that is adapted to secondary students—their personal characteristics, setting requirements, and movement toward promoting independence and preparation for college and career—is critical to success" (McDaniel et al., 2017, p. 41). A curriculum that appropriately addresses these needs is just one aspect of teaching Social Emotional Learning (SEL), and is consistent with PBIS research and theory (Barrett et al., 2018).

There were significant differences between the program post-survey means. Differences may be attributed to instructor perception of the intervention, years of experience in their respective fields, experience working with students with varying degrees of learning needs, and their own proficiency with soft-skills. Research indicates that adopting new teaching approaches, such as the ABL activities utilized in the IMPACT program, require changing pedagogical thinking and teacher engagement (Kangas et al., 2017). This can be stressful for teachers who are new to the classroom, or at the opposite end of the experience spectrum, feel comfortable in their long-held approaches. However, teacher expertise informs how flexible they are in using novel pedagogical approaches (Kangas et al., 2017). The difference in results between programs could be due to these factors.

Although instructors reported a more robust effect, students reported somewhat limited areas of significant improvement. One area in which students reported a clearly significant change was in their ability to find more than one solution to a problem. Increasing students' abilities to be flexible thinkers was an important goal of the program. Students also reported a difference approaching significance in the ability to arrive on time. This was a specific skill addressed during the debriefing of several lessons. Arriving on time for work is important; however, it is not the only requirement for professional behavior. This result shows that students may continue to be limited in their understanding of overall professional behaviors.

Students indicated less of an overall significant change in their use of soft skills following completion of the IMPACT program than was reported by teachers. However, although most of the difference in pre- and post- survey responses were not statistically

significant, mean responses increased for almost all questions. This indicates that students did report some improvement, even if it did not reach statistically significant levels. Given that instructors reported significant increases in many of the targeted soft skills may indicate that although students may have a general sense of decline or improvement in their skills for professionalism, teamwork, taking initiative, and managing their emotions, they are not proficient in gauging these skills in comparison with peers. Students also have difficulty assessing the degree to which these skills improve or approach levels desired by employers.

Improving students' soft skills for the workplace setting is an important goal of the program. However, additional instruction may be needed for students to realize a more accurate representation of their original skills and then to be able to judge their improvement accurately. Research indicates that graduates not only lack proficiency in the soft skills needed to succeed in the workplace setting, but also they are poor judges of their own levels of these skills (Andreas, 2018; Burns, 2018; Gibson & Sodeman, 2014). The students may have rated their soft skills as artificially high prior to starting the program, which then made it less likely to find statistically significant results. Developing strong skills for self-monitoring and for a more accurate understanding of employers' expectations would help to address this need.

Students' perceptions are that their responses to difficult situations did not appear to be greatly impacted by their participation in the program. Students reported gains in the ability to "count to 10", a strategy used to delay a response. This skill increased for managing both anger and anxiety. Additionally, although students described an increase

in this skill, it is important to note that this skill remained at low levels in comparison with other strategies.

Students also reported a decrease in arguing as a response to criticism by their instructors or supervisors. Although these two skills may be linked, further research would be needed to draw further conclusions. Additional research could ask students to reflect on their responses to criticism during each lesson. This would be in addition to pre- and post-survey responses focused on responses to instructor and employer constructive feedback. By asking students to reflect on a more immediate situation may provide a litmus for responses in other environments. Conte (2015) writes that reflection on one's behavior within a practical situation enhances the learning experience and provides meaning. This process of learning through reflection and feedback contributes to professional development (Comte, 2015).

Analysis of the student feedback forms indicates that students' perceptions of the lessons were largely positive. Students reported positive or neutral responses to program activities 84.2% of the time, suggesting that the IMPACT program provided a useful approach to engaging students in learning important social-emotional learning skills. At the high school level, it can be particularly challenging to keep students attentive and engaged in learning activities, and many of the group activities utilized in the IMPACT program supported student engagement.

Positive student feedback included statements such as the activity "...made us prioritize what is important to us", "Defining yourself is very hard", "Stay more focused", "Teamwork is needed in all situations", "...practice with focusing on multiple things", "use very good communication", "that communication is key into team projects"

and “what I got out of this project was a good time”. Many positive student responses indicated a focus on themes such as communication, teamwork, planning and focus, learning about others, and leadership. Negative student responses included statements such as, “too hard”, “quiet, boring, useless, too easy, try again, boring, useless, not fun”, “I honestly only got some exercise out of it, I didn't learn anything”, and “confusing and unorganized”. Negative responses included themes such as dissatisfaction with the activity itself, frustration with other classmates, and difficulty finding the purpose of the lesson or inaccurate self-reflection. Mixed responses included statements such as, “I feel like if it was one-on-one it would be more effective”, “I got some negative feedback from several people”, “that exercise was a pretty good exercise it was not that bad”, “it was ok,” and “I got that our class does a lot of illegal things”. Mixed responses were interpreted to mean that the participants liked some aspects of the lessons, but they were not a clear endorsement or understanding of the underlying competencies or goals of the lesson.

Limitations of the Study

Limitations do exist for generalizability of findings. All students surveyed were twelfth graders enrolled in a career and technical high school which pulls its population from high schools located in the same geographic region. Additionally, the student respondents were overwhelmingly male.

Success of the program could also have been impacted by the way in which classrooms of students who received the instruction were chosen. Some participation was based on percentage of students enrolled in the program who receive specially designed instruction, with a preference for programs with a high percentage of students receiving

support. Other classes were self-nominated for participation. These instructors had heard positive reviews from an instructor who participated in the pilot of the program the previous year. Finally, a small number of classes were asked to participate due to administrator recommendation. These instructors may have felt pressured to participate, which in-turn may have influenced how they participated in the program.

IMPACT was designed as a class-wide intervention that was meant to increase soft-skills for the workplace setting. Research on implementation fidelity indicates there are numerous factors that may be a barrier to the success of an intervention. Perceptions of the intervention or intervention characteristics, such as the perceived ease of use and effectiveness, as well as organizational and participant characteristics, such as administrative leadership, and skill required to implement the intervention can be factors that influence success (Long et al, 2016). Additional time with selected instructors prior to implementation may have been helpful in addressing some of these factors.

Post-IMPACT student survey response rates were negatively affected by attendance. At the end of the school year, students who are performing well within the classroom setting are recommended for a cooperative education experience during which they work in their chosen vocational field in lieu of school attendance. Due to this cooperative educational experience, some classes surveyed at the end of the year did not contain the highest performing students. Some of the students who met with success at obtaining and maintaining employment were not included in these post-surveys. Additionally, these students did not receive all of the lessons in the program.

Another limitation is in the nature of the student measurement. Self-report measures allow for the accounting of a participant's own experience, not only the

observations of practitioners or other stakeholders. However, self-report measures also may be complicated by response bias. Rosenman, Tennekoon, and Hill (2011) indicate that “There are many reasons individuals might offer biased estimates of self-assessed behavior, ranging from a misunderstanding of what a proper measurement is to social-desirability bias, where the respondent wants to ‘look good’ in the survey, even if the survey is anonymous” (pg. 2). One type of bias that may have affected outcome data is response-shift bias. This occurs when an intervention changes a respondent’s understanding of the measured concept (Rosenman et al, 2011). Participating in IMPACT may have given students a better understanding of their own soft-skills for the workplace. Therefore, students may have answered the questions on the pre-survey with an artificially inflated sense of their skills, the lack of significant improvement may have been due to a more realistic understanding of their own skills.

Two instructors did not complete Post-IMPACT surveys for any student in their classes. This lack of participation may also have had a negative effect on outcome data. Additionally, instructor buy-in appeared to result in improved student participation. Instructors who consistently demonstrated a positive attitude during lessons and worked without prompting to connect the concepts to their vocational area, may have facilitated more positive student outcomes.

Finally, limitations include the challenges that are inherent to research in the school setting. Many factors within schools influence interventions and their implementation. These factors may be environmental, such as limited physical space, or may be chronological, such as schedule changes. Those responsible for the delivery of the IMPACT program had to be flexible due to testing schedules, field trips, snow days,

special events, and room changes. Due to scheduling conflicts, some lessons had to be “doubled-up”, with two occurring in the same week. This decision was made in order to provide the entire sequence of activities. Teachers across the country face this type of pressure when trying to meet the demands of a scripted curriculum. Additional research, with a focus on program fidelity would lead to a greater understanding of how these specific factors influenced student outcomes.

Implications for Practice

The IMPACT program targets important skills needed for transition-age students to succeed in the workplace setting. The findings of this study indicate that all stakeholders had generally positive perceptions of the program. Instructors and other staff reported observing greater benefits than student stakeholders, although this may be due to typical adolescent development and a deficit in skills for self-monitoring. Adding direct instruction in self-monitoring strategies may increase students’ awareness of skills gained through the IMPACT program.

Co-facilitated learning is a situation in which both the student and teacher have equal shares in the process (Heritage, 2018). This is consistent with Vygotsky’s concept that learning is “a culturally based communicative process through which knowledge is shared and constructed” (p.53). Although the students have the ability to drive the problem-solving process of the ABL activities, the debriefing portion of the lesson that asks students to reflect on their learning is guided by the facilitators and instructors. Giving students more ownership over this process through increased self-reflection may improve not only their knowledge of the competencies and associated skills, but also an honest appraisal of their own soft-skills.

There are several strategies that facilitate increased self-reflection. One strategy would be to add brief student surveys following each lesson. This could help to improve the quality of student self-reflection. Questions such as, “Did I understand all the directions?” and “How did my participation compare with my peers”, would guide student self-assessment and learning.

Another strategy to increase self-monitoring of soft skills would be to pair the students to answer the student survey following each lesson. This would allow for the opportunity, not only to self-reflect, but to also check for accuracy of perception among peers.

Finally, technology could also improve student awareness of soft skill attainment. Specific lessons could be videotaped, possibly three times in the lesson cycle. This would allow students to observe their own behaviors and reflect upon growth. Multiple taped observations could help students to refine their own goals for the workplace. Students’ understanding of the aims of the IMPACT program and how it relates to their own goals is indispensable for learning and self-monitoring (Heritage, 2018).

Instructors consistently rated students who receive specially designed instruction as demonstrating lower levels of soft skills. Although students did make gains, those gains were not enough to close the gap between general education students and students who receive specially designed instruction. This may indicate that students who receive special education services may benefit from direct instruction in soft skills for the workplace at an earlier age. Just as research for reading fluency has indicated that the earlier interventions for at-risk students are started, the sooner the gap in performance closes, interventions for social-emotional learning for the workplace may need to begin

before students are eligible for employment. This may seem intuitive for students who are identified as having needs consistent with an Emotional Disturbance or Autism Spectrum Disorder; however, students in the IMPACT program demonstrated a mix of needs, with the majority identified as students with a Specific Learning Disability. Studies abound, indicating that students with learning disabilities are at a disadvantage when entering the job market (Kerka, 2002; Madaus, 2006; Wagner et al, 2016), but few of these studies focus on specifically improving soft skills. Transition planning teams should consider not only technical or academic skills development, but also social-emotional skills that will benefit students in the workplace.

Although collaboration was easier due to an already established rapport with the instructors, administrators, and teachers, regular follow-up could sometimes be hindered by the program staffs' other job responsibilities. The research on the IMPACT program was completed while simultaneously carrying out normal daily job activities. In the school setting, school psychologists and social workers already have extensive professional responsibilities that require excellent time management and flexibility. Adding tasks that are necessary for research to these roles can create additional stress on personnel. Finding ways for currently employed school psychologists and other professionals to lead and participate in research is an important step in adding to the literature on interventions that are not only feasible, but also successful in the school setting.

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Appendix A

Sample Activity Description and Lesson

Stepping Stones

The participants are faced with a task to get all of their team members across the “lava bed” safely. To accomplish this task, the group must reach the other side safely using only the stepping stones.

Directions

Place two ropes apart from each other about 15-20 feet depending on the size of your group.

Explain the objective to cross the lava bed using only the stepping stones provided. Provide the students with stepping stones (different sized pieces of foam covered in duct tape).

Rules

1. Once the stepping stones cross the line where the lava begins, they must be touched by a body part at all times or they will be lost.
2. There can be no piggy-backing on team members.

Watch the first stepping stones very carefully. It is likely the group will forget about the rule that a body part needs to be touching it at all times and will throw it down without putting their foot down. If this happens, take away the stone immediately.

If the group loses too many stones to make it across the lava bed, you can offer a chance to “buy” back a square by answering a vocational question or doing something ridiculous.

NACE Standard: Manage Emotions and Conflict; Thinking Skills; Action Toward Goal

Setting; Professionalism

Objectives: To work together as a team; To differentiate between setting goals and the process; To work together as a team; To develop a process to accomplish a goal

Group Size: 10-20

Time: 45-50 minutes

Materials: Two ropes, stepping stones (half the number of students plus 1), Penalty cards

Lesson: Refer to Activity Description

Debrief Activity: What worked? What did not work?

Was there any teamwork in your group? On a scale of 1-10, how much?

Did everyone have a purpose?

Who stepped up and started brainstorming?

Was this person supported or ignored?

What was our goal in this activity?

What was the process your team used to solve this problem?

How are the goal and process different?

Why is it necessary to have goals?

Appendix B**Student Feedback Form**

Student Evaluations of Lesson: Minefield

Date: _____

In a few words, please share what you got out of this lesson:

Please rate this activity:



Appendix C**Student Survey**

On a scale of 1 to 5, rate yourself on your ability to demonstrate the following skills. Ratings of 1 indicate not at all, ratings of 2 indicate a little bit, ratings of 3 indicate some of the time, ratings of 4 indicate most of the time, and ratings of 5 indicate almost all of the time. For example, if you arrive at work on-time every day, you would choose a rating of 5. If you are on-time for work 4 out of 5 days, you would choose a rating of 4. If you are on-time for work 3 out of 5 days, you would choose a rating of 3. If you are on-time for work 2 out of the 5 days, you would choose a rating of 2. Finally if you are on-time 1 or fewer days of the week you choose 1.

1) How often do you work well with others to get a job done?

1 2 3 4 5

Comments:

2) How often do you work well with others who have different skills or personal characteristics from you?

1 2 3 4 5

Comments:

3) How often do you ask for help when you need it?

1 2 3 4 5

Comments:

4) How often do you share your ideas with other people?

1 2 3 4 5

Comments:

5) How often do you have difficulty working with others to get a job done?

1 2 3 4 5

Comments:

6) When something is not going well at school or work, how often do you use one of the following strategies?

a) Cursing

1 2 3 4 5

b) Arguing

1 2 3 4 5

c) Walking Away

1 2 3 4 5

d) Wait it out

1 2 3 4 5

e) Ignore the problem

1 2 3 4 5

f) Talk to a supervisor

1 2 3 4 5

g) Ask a peer for help

1 2 3 4 5

h) Use trial and error

1 2 3 4 5

i) Look for missing information

1 2 3 4 5

Comments:

7) How often do you take your time to think about a task or question before answering?

1 2 3 4 5

Comments:

8) How often can you find more than one solution to a problem?

1 2 3 4 5

Comments:

9) How often do you use the following strategies when stuck on a problem?

a) Brainstorming

1 2 3 4 5

b) Research other ways to do a task

1 2 3 4 5

c) Ask for input from others

1 2 3 4 5

d) Look for a "work-around"

1 2 3 4 5

e) Change environments

1 2 3 4 5

f) Take a break

1 2 3 4 5

g) Go help someone else with something they are working on

1 2 3 4 5

Comments:

10) How often do you use the following strategies to manage your anger in a workplace setting?

a) Walk away

1 2 3 4 5

b) Ask for help

1 2 3 4 5

c) Use relaxation strategies

1 2 3 4 5

d) Engage in conflict resolution

1 2 3 4 5

e) Count to 10

1 2 3 4 5

Comments:

11) How often do you use the following strategies to manage your anxiety in the workplace setting?

a) Walk away

1 2 3 4 5

b) Ask for help

1 2 3 4 5

c) Use relaxation strategies

1 2 3 4 5

d) Engage in conflict resolution

1 2 3 4 5

e) Count to 10

1 2 3 4 5

Comments:

12) How long does it take you to get back your focus after a set-back?

- a) Less than 5 minutes
- b) 5-10 minutes
- c) 10-15 minutes
- d) 15-30 minutes
- e) 30 minutes -1 hour
- f) More than an hour
- g) The next day

Comments:

13) How often do you respond in the following ways to critical feedback about your work?

- a) Try to apply what was said

1 2 3 4 5

- b) Get anxious

1 2 3 4 5

- c) Get angry

1 2 3 4 5

- d) Talk about it till you understand

1 2 3 4 5

- e) Argue with the teacher or supervisor

1 2 3 4 5

- f) Ask a supervisor for help

1 2 3 4 5

- g) Ask for help from a peer who was successful

1 2 3 4 5

Comments:

14) How often do you complete tasks on time?

1 2 3 4 5

Comments:

15) How often are you able to recognize a different point of view and use compromise to meet a shared goal?

1 2 3 4 5

Comments:

16) How often, after you make a mistake, do you take the time to look back and learn from what happened?

1 2 3 4 5

Comments:

17) How often do you apologize after you realize you hurt someone's feelings?

1 2 3 4 5

Comments:

18) How often are you on time for work?

1 2 3 4 5

Comments:

19) How comfortable are you at talking about the things you are good at?

1 2 3 4 5

Comments:

20) How comfortable are you at talking about things you would like to improve?

1 2 3 4 5

Comments:

21) How often do you take a leadership role in a group project?

1 2 3 4 5

Comments:

22) Which of the following leadership activities have you been involved in?

- a) School-related sports team
- b) Recreational league sports team
- c) Student council
- d) Church youth group
- e) Band or orchestra
- f) Chorus
- g) Newspaper or other school publication
- h) Skills USA
- i) Volunteer work
- j) Other:

Appendix D**Instructor Survey**

On a scale of 1 to 5, rate each student individually on how often he or she demonstrates the following skills. Ratings of 1 indicate not at all, ratings of 2 indicate a little bit, ratings of 3 indicate some of the time, ratings of 4 indicate most of the time, and ratings of 5 indicate almost all of the time.

1. Work cooperatively (build relationships with diverse individuals)

1 2 3 4 5

Initial impressions:

2. Advocate for their needs (ask for help when needed and initiate interaction)

1 2 3 4 5

Initial Impressions:

3. Professional language (use professional tone and content when speaking to both peers and supervisors)

1 2 3 4 5

Initial Impressions:

4. Obtain information that may be needed to solve a problem (find information when needed)

1 2 3 4 5

Initial Impressions:

5. Analyze information (interpret, and utilize knowledge)

1 2 3 4 5

Initial Impressions:

6. Use information creatively (demonstrates originality and inventiveness)

1 2 3 4 5

Initial Impressions:

7. Shares their ideas with the group (communicates relevant information to the group)

1 2 3 4 5

Initial Impressions:

8. Recover from difficult situations (manage their emotions while completing required tasks)

1 2 3 4 5

Initial Impressions:

9. Negotiate and manage conflict (recognize others' strengths and use empathy to work toward a common goal)

1 2 3 4 5

Initial Impressions:

10. Demonstrate personal accountability (demonstrates ethical behavior and understands that their behavior impacts others)

1 2 3 4 5

Initial Impressions:

11. Changes behavior in response to critiques or feedback (learns from his or her mistakes)

1 2 3 4 5

Initial Impressions:

12. Arrives to work on time and completes assignments on time (punctuality and time management)

1 2 3 4 5

Initial Impressions:

13. Demonstrate effective work habits (demonstrates organization and ability to prioritize)

1 2 3 4 5

Initial Impressions:

14. Identify personal strength (able to articulate his or her skills, knowledge, and experience)

1 2 3 4 5

Initial Impressions:

15. Identify areas of weakness (identify areas in need of skill or professional growth)

1 2 3 4 5

Initial Impressions:

16. Adopt a leadership role within the classroom (use empathetic skills to guide, motivate and delegate work.)

1 2 3 4 5

Initial Impressions:

Appendix E**IMPACT Stakeholder Feedback Form**

1. Indicate your professional role

- ☐ CTC instructor
- ☐ CTC school counselor
- ☐ IU13 learning Support
- ☐ Administrator
- ☐ IU13 Support Team
- ☐ Other

2. What is your understanding of the purpose of the IMPACT program? (Choose all that apply)

- ☐ Increase students' skills for managing for their emotions
- ☐ Increase students' skills for demonstrating professionalism in the workplace setting
- ☐ Increase students' ability to set goals
- ☐ Increase students' ability to take initiative
- ☐ Other

3. Who does the IMPACT program benefit? (Choose all that apply)

- ☐ CTC students
- ☐ CTC instructors
- ☐ CTC administration
- ☐ Sending school districts
- ☐ Business owners
- ☐ IU13 learning support teachers
- ☐ IU13 support personnel (school psychologist, social worker, SEC, etc.)
- ☐ CTC students' parents or guardians
- ☐ None of the above
- ☐ Other

4. For those indicated above, please describe how they benefit from IMPACT.

5. In your opinion, students who participated in the program were able to increase which of the following: (Choose all that apply)

- ☐ Increase students' skills for communication in the workplace
- ☐ Increase students' skills for problem solving
- ☐ Increase students' skills for managing their emotions
- ☐ Increase students' skills for demonstrating professionalism in the workplace setting
- ☐ Increase students' ability to set goals
- ☐ Increase students' ability to take initiative
- ☐ It has no discernible effect
- ☐ Other

6. On a scale of 1-5, how engaging are the activities for the students? (answer only if you have observed or taught the lessons)

	1	2	3	4	5	
Not at all engaging						Highly engaging

7. On a scale of 1-5, how much do you agree that the materials chosen for each lesson are a necessary part of the instruction? (answer only if you have observed or taught the lessons)

	1	2	3	4	5	
Not at all necessary						Essential

8. On a scale of 1-5, how helpful is the sequence of activities in forwarding the purpose of IMPACT? (answer only if you have observed or taught the lessons)

	1	2	3	4	5	
Not at all helpful						Extremely helpful

9. On a scale of 1-5, how much do you agree with the length of the lessons presented? (answer only if you have observed or taught the lessons)

	1	2	3	4	5	
Not at all agree						Very much in agreement

10. What would you change about the IMPACT program? (Choose all that apply)

- ☐ Techniques for engaging students
- ☐ Materials chosen for lessons
- ☐ Sequence of activities
- ☐ Length of lessons
- ☐ Nothing
- ☐ Other

11. If your above choice indicated something you would change, tell us more about how you would change or alter that aspect of the IMPACT program.

12. On a scale of 1-5, how consistent is the purpose of IMPACT with the goals of the CTC?

	1	2	3	4	5	
Not at all consistent						Very consistent